

THE OREGON CENTRAL MILITARY WAGON ROAD: A HISTORY AND RECONNAISSANCE

STEPHEN DOW BECKHAM



United States
Department of
Agriculture

Forest Service

Pacific
Northwest
Region

Willamette
National Forest

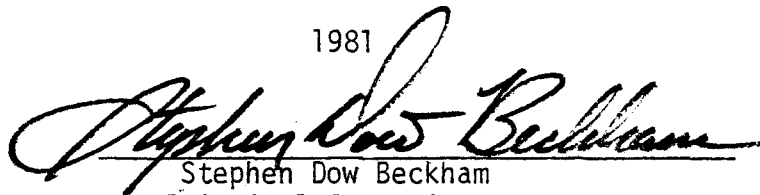


OREGON CENTRAL MILITARY WAGON ROAD
A HISTORY AND RECONNAISSANCE
VOLUME I

Willamette National Forest
Supervisor's Office
Eugene, Oregon

Stephen Dow Beckham
Professor of History
Lewis and Clark College
Portland, Oregon

1981



Stephen Dow Beckham
Principal Investigator

Heritage Research Associates Report No. 6

No. 53-04H1-0-8061N

LIBRARY COPY

DATE: 11/10/81 BY: [illegible]

0 11 11 11

ABSTRACT

This study is an historical overview and on-site inventory of the Oregon Central Military Wagon Road as it crosses the lands of the Willamette and Deschutes National Forests in Oregon. Its primary purpose is to provide a framework for the interpretation of this historic route, an identification of its historical significance, and a justification for the management recommendations which have grown out of this research project.

Following a brief statement about the environmental setting through which the road passed, an in-depth historical narrative establishes the reasons for the construction of the road, its context in federal government activities in nineteenth century Oregon, the building of the road, and its use. The section on the use of the road is documented by extensive data analysis of the extant records of travelers on the route between 1871 and 1896. No such comparable record set exists for any other nineteenth century transportation route in Oregon. This section is completed with an overview of the litigation surrounding the road and later use of the route in the twentieth century.

The remainder of volume one is devoted to comments about previous historical research on the Oregon Central Military Wagon Road, the methodology employed in this study, the cultural resource features encountered during the field reconnaissance, and the recommendations to the U. S. Forest Service regarding this route. Volume one is completed with a listing of the references used for this project.

Volume two, restricted because of the site-sensitive data contained within it, contains an analysis of the road route from the headwaters of Lookout Point Dam (T20S, R2E, Sec. 21) to the point where the route leaves the Deschutes National Forest and enters Klamath County (T26S, R7E, Secs., 31, 36). Each section through which the road passed was subjected to on-the-ground survey for remaining features. This project was assisted by historic maps. All special features and representative road segments were photographed. Volume two contains the summary field notes and photographs of this reconnaissance.

ACKNOWLEDGMENT

The research and writing of this history of the Oregon Central Military Wagon Road on the lands of the Willamette and Deschutes National Forests was the product of several months of labor. Along the route of study and during the field reconnaissance several individuals and the staffs of various institutions contributed to this project.

I particularly want to thank Christopher Friday, a senior at Lewis and Clark College, whose assistance at each stage of this project was crucial in the carrying out of this endeavor. Chris walked the entire route with me from Lookout Point Dam to the Klamath County border. He endured my suffering from poison oak and my persistence in plunging again and again into the brush to attempt to pick up the old road ruts which I knew must be out there, somewhere. Chris also modified the SPSS (Statistical Package for the Social Sciences) program, entered the data, and made the computer runs for the statistical information on road use.

Several personnel of the U. S. Forest Service helped at various stages in this project. Sheri Reyna, formerly of the Rigdon Ranger District, graciously worked with me in the early stages of the field reconnaissance and, using her knowledge of the upper sections of the Middle Fork of the Willamette, pointed out several surviving sections of the old road. Claudia Nisley, former archaeologist for the Willamette National Forest, encouraged me and joined me in the field as we went over the road as found west of Summit Lake. Leroy Steece of the Crescent Ranger District provided maps and suggestions about the road route on the Deschutes National Forest. Richard Grace of the Forest Supervisor's Office for the Willamette National Forest completed the work as contract supervisor and patiently saw this project finished.

The staff members of the Oregon Historical Society, the Oregon State Archives, and the University of Oregon Library assisted in the location of reference materials. I am especially grateful to the Oregon Historical Society for preserving the manuscript records of Stephen Rigdon, the data from which the statistical analysis was developed for this report. The University of Oregon Library's Department of Special Collections and Newspaper Room also contained pertinent materials for this project.

Lastly, I want to thank my wife, Patti, and my children, Andrew Dow and Ann-Marie, who tolerated my many absences from home to do the research and make the field reconnaissance of the Oregon Central Military Wagon Road. Wanda L. Cox, my gracious mother-in-law, proof read the many tables included in the first volume.

To all of these people I extend my appreciation.

TABLE OF CONTENTS

"The lands granted to the company within the State by the National Government, amounting to three sections, or one thousand nine hundred and twenty acres, for each mile of the road built, will, in time, become an important source of revenue to the company, reimbursing in part, or in whole, for their expenditures in its construction."

B. J. Pengra, 1865

ABSTRACT	ii
ACKNOWLEDGMENT	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	viii
I. INTRODUCTION	
Management Summary	1
Introductory Statements	1
II. ENVIRONMENTAL SETTING	
Introduction	3
Physiography and Geology	3
Hydrology	4
Vegetation	5
Fish and Wildlife	7
Climate	8
III. HISTORIC BACKGROUND	
Introduction	10
The Role of the Federal Government	11
The Challenge of the Cascades	14
Genesis of the Oregon Central Military Wagon Road	19
Building of the Oregon Central Military Wagon Road	22
Use of the Oregon Central Military Wagon Road	43
Data Analysis	45
Party Size	46
Road Use by Month	51
Road Use by Direction by Month	54

Travel East and West	74
Traveler Destinations	77
Men	83
Women	87
Children	91
Wagons	95
Horses	98
Cattle	105
Sheep	112
The Oregon Central Military Wagon Road in the Courts . . .	117
Twentieth Century Use of the Route	122
IV. PREVIOUS HISTORIC PRESEARCH	
Historical Accounts	123
V. METHODOLOGY	
Research Design, Justification, and Field Procudures . .	125
VI. CULTURAL RESOURCES	
Summary	126
VII. RECOMMENDATIONS	
Work Not Accomplished	127
Specific Actions	127
VIII. REFERENCES	
Bibliography	130

LIST OF TABLES

<i>TABLE</i>		<i>PAGE</i>
1	Mean and Mode of Party Size	46
2	Absolute Frequency of Party Size	47
3	Adjusted Frequency (%) of Party Size	49
4	Mean and Mode of Road Use by Month	51
5	Absolute Frequency of Road Use by Parties by Month	52
6	Relative Frequency of Road Use by Parties by Month	53
7	Total of Travelers by Direction	54
8	Total of Cattle by Direction	55
9	Movement of Travelers by Direction by Month . . .	56
10	Movement of Cattle by Direction by Month	62
11	Movement of Sheep by Direction by Month	68
12	Mean and Mode of Travel East and West	74
13	Absolute Frequency of Travel East and West . . .	75
14	Relative Frequency (%) of Travel East and West	76
15	Traveler Destinations	78
16	Mean and Mode of Men in Traveling Parties	83
17	Absolute Frequency of Men in Traveling Parties .	84
18	Adjusted Frequency (%) of Men in Traveling Parties	85
19	Relative Frequency (%) of Men in Traveling Parties	86
20	Mean and Mode of Women in Traveling Parties . . .	87
21	Absolute Frequency of Women in Traveling Parties	88

TABLE

PAGE

22	Relative Frequency (%) of Women in Traveling Parties	89
23	Adjusted Frequency (%) of Women in Traveling Parties	90
24	Mean and Mode of Children in Traveling Parties . . .	91
25	Absolute Frequency of Children in Traveling Parties	92
26	Adjusted Frequency (%) of Children in Traveling Parties	93
27	Relative Frequency (%) of Children in Traveling Parties	94
28	Mean and Mode of Wagon Use	95
29	Absolute Frequency of Wagons	96
30	Adjusted Frequency (%) of Wagons	97
31	Mean and Mode of Horses in Traveling Parties . . .	98
32	Absolute and Adjusted (%) Frequency of Horses in Traveling Parties	99
33	Mean and Mode of Cattle	105
34	Absolute Frequency of Cattle	106
35	Mean and Mode of Sheep	112
36	Absolute and Adjusted (%) Frequency of Sheep in Traveling Parties	113

LIST OF FIGURES

<i>FIGURE</i>		<i>PAGE</i>
1	Map of Oregon Central Military Wagon Road, 1865	37
2	Rigdon Meadows, T24S, R4E, Sec. 16.	42
3	Old Grade West of Beaver Swamp, T24S, R5E, Sec. 22.	42

I. INTRODUCTION

Management Summary

The materials reported in the two volumes of this study strongly suggest that the Oregon Central Military Wagon Road is a unique, historical, cultural resource and that substantial portions of it yet remain on federal lands in Oregon. Although reservoir and road construction, logging, and other land-impacting activities have in a number of places obliterated or altered this historic route, two fundamental factors suggest that it should be nominated to the National Register of Historic Places: (1) sufficient sections of the original road remain in their original condition for the development of an Oregon Central Military Wagon Road recreation trail, and (2) an unparalleled quantitative data base exists for this road (and is the subject of analysis in this report) for a level of interpretation not available for any other nineteenth century route of travel in the Pacific Northwest.

Peripheral considerations which have bearing on the management recommendations include: (1) the high visual values and preservation of the natural environment along much of the road route under study, (2) the possibility of linking this route to the Pacific Crest Trail along the summit of the Cascades and the State of Oregon's Willamette Greenway Corridor in the Willamette Valley, and (3) the development in the central section of the Cascades in Oregon of an historic recreational resource comparable to the Barlow Road-Old Oregon Trail which traverses 44 miles of the Mount Hood National Forest.

Introductory Statements

The field work for this study was carried out in August and September, 1980. The first on-site visit was made in July, 1980, and two return visits to check historic features were made in July and August, 1981.

The general location for this study was eastern Lane County in the watershed of the Middle Fork of the Willamette River and in southwest Deschutes County in the watershed of the Little Deschutes River. The field reconnaissance commenced in Section 21, T20S, R2E at the headwaters of Lookout Point Reservoir east of Lowell, Oregon, and ran southeasterly to Sections 31, 36, T26S, R7E on the boundary between Deschutes and Klamath counties (see map).

Among the conditions which affected the field work were the following: destruction of segments of the original road by later road construction and improvement; the impact of logging, especially with heavy equipment, in areas traversed by the road; the growth of extremely dense understory and comparable features of forest regeneration along the road route west of the Cascade summit; the

construction of Lookout Point and Hills dams whose reservoirs have covered several miles of the route of the road; and the lack of intensive construction along the road route southeast of Crescent Lake by the original road company in the nineteenth century. This last factor meant that in some sections the identification of the original road traces was, at best, problematic.

The principal investigator, Stephen Dow Beckham, assures the U. S. Forest Service that he is the sole author and researcher of this study. Data entry and program development was carried out by Christopher Friday, a senior student in history and business at Lewis and Clark College. Data analysis, interpretation, development of recommendations, assessment of significance, and narrative writing were done by Beckham.

II. ENVIRONMENTAL SETTING

Introduction

The Oregon Central Military Wagon Road traverses a variety of physiographic provinces in its route from the Willamette Valley to the eastern border of the state. On the Willamette and Deschutes National Forests, however, the differences in the settings are readily identified. The principal feature dominating the road route is the Cascade Range and its western and eastern flanks. These mountains provided a major challenge to the road surveyors and builders in the 1860's and have persisted as a central factor in the history of the use and development of the road to the present day.

Physiography and Geology

The wagon road in the study area traverses four physiographic and geological provinces: Willamette Valley, Western Cascades, High Cascades, and High Lava Plains. While the route began in the province of the Willamette Valley, the study area commences very near the point where the road entered the Western Cascade Province in the vicinity of the reservoir at Lookout Point Dam. The southern terminus of the study area is at that point where the High Lava Plains Province starts to drop off gradually to the southeast into the Basin and Range Province.

The Western Cascades Province consists of Oligocene and Miocene volcanic flows and pyroclastics. It is a setting of gentle sloping hillsides near the Willamette Valley and increasingly rugged and sharply defined canyons and ridges farther to the east. The volcanic nature of this province is testified to by the deposits of andesites, basalts, and pyroclastic rocks. During the Pleistocene this province was subjected to alteration by glaciation, producing deposits of glacial drift and U-shaped valley drainages. Approximately three-fourths of the province between the McKenzie River and the South Umpqua is made up of pyroclastic rocks (Baldwin 1959: 58; Franklin and Dyrness 1973: 23-24).

Geologists have identified two major soil groups in the Western Cascades. The first consists of those primarily derived from pyroclastic materials (tuffs and breccias) and the second is that derived from igneous rocks (basalt and andesite). The soils produced by the pyroclastic flows tend to be poorly drained and thus often produce earthflows and slumps. The soils derived from basalt and andesite are much better drained and are often coarser and contain more stones (Franklin and Dyrness 1973: 24).

The High Cascades Province is an area in which occur a series of impressive volcanic peaks and a rolling terrain interrupted at a

number of points by glaciated channels which frequently carry streams flowing to the west. In the vicinity of the Oregon Central Military Wagon Road the major peaks of this province are Diamond Peak to the north of the route and Cowhorn Mountain to the south. The former has an elevation of 8,750 feet, while the latter is 7,666 feet high. This province is geologically young and active, with extensive lava flows and depositions of volcanic ash and pumice. Throughout this province is material laid down by the cataclysmic eruption of Mount Mazama (which produced Crater Lake) of approximately 6,600 years ago (Baldwin 1959: 60-65; Franklin and Dyrness 1973: 25-26).

Glaciation has occurred and continues to occur on the high peaks in this province. Immature soils are found throughout this area and contain extensive deposits of pumice, cinders, and ash. Geologists have found little profile development in these materials (Franklin and Dyrness 1973: 26).

The High Lava Plains Province is located in Central Oregon and includes the upper watershed of the Deschutes River. It, too, is a province produced by recent volcanic activity and is a generally undulating plain with scattered cinder cones and lava buttes. Some of the streams which flow through this region are seasonal because of the porous bedrock and the scanty rainfall. The geological formations are largely the product of Pliocene and Pleistocene flows, however Quaternary valley fill deposits overlie many of the older flows. Mount Mazama pumice is abundant in this region as are some Pleistocene lava deposits (Franklin and Dyrness 1973: 32-33).

In the western part of this Province, near the eastern base of the Cascades where the Oregon Central Military Wagon Road descends from Summit Lake into the High Lava Plains, geologists have identified regosolic soils developed on top of pumice. This thin layer of soil supports the pine forests which have developed in this province (Franklin and Dyrness 1973: 34).

Hydrology

The Oregon Central Military Wagon Road passes through the watersheds of the Middle Fork of the Willamette River and the upper Deschutes River. The Middle Fork has its source at Lake Timpanogas in the extreme southwestern corner of this sub-basin feeding into the upper Willamette Valley. It is also fed by streams emerging from Beaver Marsh and the upwelling at Indigo Springs. The principal tributaries of the Middle Fork of the Willamette have their origins in the High Cascades. Four of these tributaries enter the main Middle Fork in the vicinity of Oakridge. They are Salt Creek, Hills Creek, North Fork, and Salmon Creek. Farther to the west Fall Creek and Little Fall Creek, draining the Western Cascades, are also important tributaries. The Middle Fork drainage encompasses 1,354 square miles or

866,600 acres (Oregon State Water Resources Board 1961, 1965).

East of the summit of the Cascades the Oregon Central Military Wagon Road enters the watershed of the upper Deschutes River and its many tributaries. Sluggish Summit Creek, Summit and Crescent lakes, and Big Marsh Creek are watersheds through which the route initially passes. Between Beales Butte and Muttonchop Butte the road enters the drainage of Hemlock Creek and then crosses the Little Deschutes River. All of these streams eventually enter the Deschutes, an important tributary of the Columbia east of the Cascades (Oregon State Water Resources Board 1961, 1965).

Vegetation

In the study area the Oregon Central Military Wagon Road passes through four major vegetational areas: *Tsuga heterophylla* Zone, Subalpine forests, *Abies grandis* and *Pseudotsuga menziesii* Zones, and *Pinus ponderosa* (Pumice Region) Zone.

The *Tsuga heterophylla* Zone is best known as the major timber production area in the Pacific Northwest. This zone is found in both the Coast Range and in the Western and High Cascades. In the Cascades this zone varies from almost sea level or 150 meters to 1,000 meters in elevation. Franklin and Dyrness have pointed out that though this area is called the *Tsuga heterophylla* Zone, large areas are dominated by the forests of *Pseudotsuga menziesii*. This zone has been one of extensive forest fires and logging during the last 150 years, often leaving the *Pseudotsuga* as the dominant or solely dominant species (Franklin and Dyrness 1973: 71).

Important species in the *Tsuga heterophylla* Zone of the Western Cascades include the following:

Overstory trees: *Tsuga heterophylla*, *Pseudotsuga menziesii*, *Thuja plicata*, *Libocedrus decurrens*, *Pinus lambertiana*, *Acer macrophyllum*, *Arbutus menziesii*.

Regeneration settings: *Tsuga heterophylla*, *Pseudotsuga menziesii*, *Thuja plicata*, *Libocedrus decurrens*, *Pinus lambertiana*, *Acer macrophyllum*, *Arbutus menziesii*.

Shrubs: *Acer circinatum*, *Rhododendron macrophyllum*, *Castanopsis chrysophyllum*, *Holodiscus discolor*, *Corylus cornuta*, *Taxus brevifolia*, *Cornus nuttallii*, *Vaccinium parvifolium*, *Berberis nervosa*, *Gaultheria shallon*, *Rubus ursinus*, *Symphoricarpos mollis*.

Herbs: *Achlys triphylla*, *Viola sempervirens*, *Trillium ovatum*, *Polystichum munitum*, *Linnaea borealis*, *Vancouveria hexandra*, *Galium triflorum*, *Trientalis latifolia*, *Lathyrus polyphyllus*, *Medea gracilis*, *Collomia heterophylla*, *Hieracium albiflorum*, *Synthyris reniformis*,

Xerophyllum tenax, *Iris tenax*, *Festuca occidentalis*, *Whipplea modesta*, *Champhila umbellata*, *Coptis laciniata*, *Tiarella unifoliata*, *Disporum hookeri*, *Asarum caudatum*, *Athyrium filix-femina*, *Blechnum spicant*, *Oxalis oregana*.

This medley of vegetation indicates that this zone is densely covered with plant species. It exhibits a dense understory of herbs and shrubs and, in old growth areas, is dominated by an awesome overstory. This zone was a formidable challenge to builders of the Oregon Central Military Wagon Road because of the extensive vegetation. Windfalls of the major overstory trees continued to serve as obstacles to road travelers throughout the years of use of this route (Franklin and Dyrness 1973: 74).

The Subalpine forests constitute a narrow zone which extends along the eastern and western flanks of the summit of the Cascades in Oregon and Washington. This region of forest and meadow is extensively developed and may, in part, be the product of the heavy deposition of snowpack which remains until the early summer. The meadow communities, which are common in this zone, do not appear in the area traversed by the wagon road. The forest tree species which occur in this zone in the Central Cascades, however, include: *Abies amabilis*, *Abies lasiocarpa*, *Abies magnifica* var. *shastensis*, *Pinus albicaulis*, *Pinus contorta*, and *Tsuga mertensiana*. The setting at Emigrant Pass and Summit Lake is sufficiently lower in elevation to be dominated by forest communities of *Abies amabilis* and *Abies lasiocarpa* west of the summit and *Pinus contorta* east of the pass (Franklin and Dyrness 1973: 272-73).

The *Abies grandis* and the *Pseudotsuga menziesii* Zones also extend in a narrow band along the flanks of the Cascades to the east of the summit. The *Abies grandis* Zone is the highest of these two in elevation and is often bounded on its upper margins by the distribution of *Abies lasiocarpa* and on its lower elevation by *Pseudotsuga menziesii*. Important species in this zone east of the summit of the Cascades include the following:

Overstory trees: *Abies grandis*, *Pinus ponderosa*, *Pinus contorta*, *Larix occidentalis*, and *Pseudotsuga menziesii*. Several other species are present in this zone in limited numbers in localized settings.

Shrubs: *Rosa bymnocarpa*, *Pachistima myrsinites*, *Ribes lacustre*, and *Vaccinium membranaceum*.

Herbs: *Bromus vulgaris*, *Balium triflorum*, *Smilacina stellata*, *Thalictrum occidentale*, *Arnica cordifolia*, *Mitella stauropetala*, *Arenaria macrophylla*, *Hieracium albiflorum*, *Linnaea borealis*, *Viola glabella*, *Anemone piperi*, *Anemone lyallii*, *Trillium ovatum*, *Clintonia uniflora*, *Asarum caudatum*, *Lupinus latifolius*, and *Rubus lasiococcus*. (Franklin and Dyrness 1973: 195).

The *Pseudotsuga menziesii* Zone is the next zonal step in lower elevation vegetation distribution along the eastern flank of the Cascades. It normally falls between the *Abies grandis* Zone on its upper elevation and the *Pinus ponderosa* Zone on its lower elevation. Important species in this zone include the following overstory trees: *Pseudotsuga menziesii*, *Pinus ponderosa*, *Pinus contorta*, and *Larix occidentalis*. The distribution of understory shrubs and herbs depends upon the particular association with the dominant *Pseudotsuga menziesii* in various locations (Franklin and Dyrness 1973: 190-92).

The *Pinus ponderosa* Zone, associated with the Pumice Region along the eastern flank of the Central Cascades, shades on its upper elevations into the *Pseudotsuga menziesii* stands and on its lower edge into the plains of *Artemisia tridentata*. This zone has a short growing season and receives minimal summer precipitation. The forest distribution in the zone is as follows:

Overstory trees: *Pinus ponderosa*, *Pinus contorta*, *Abies concolor*.

Shrubs: *Purshia tridentata*, *Arctostaphylos patula*, and *Ceanothus velutinus*.

Herbs: *Gayophytum nuttallii*, *Cryptantha affinis*, *Collinsia parvifolia*, *Viola purpurea*, *Senecio integerrimus*, *Lomatium tritermatum*, *Arabis rectissima*, *Madia minima*, *Achillea millefolium lanulosa*, *Paeonia brownii*, *Antennaria corymbosa*, *Eriophyllum lanatum*, *Phacelia heterophylla*, *Lupinus caudatus*, *Phlox gracilis*, *Fragaria chiloensis*, *Antennaria geyeri*, *Epilobium angustifolium*, *Hieracium cynoglossoides*, *Pyrola picta*, *Chimaphila umbellata*, and *Apocynum androsaemifolium*. (Franklin and Dyrness 1973: 171, 178).

Fish and Wildlife

Several varieties of fish are found in proximity to the route of the Oregon Central Military Wagon Road as it crosses the Deschutes and Willamette National Forests. They fall in the following groups: (1) anadromous--those that spend part of their lives in the ocean but return to fresh water to spawn; (2) cold-water game fish--these include trout, kokanee, white sturgeon, and mountain whitefish; (3) warm-water game fish--among these specimens are bass, catfish, and panfish; and (4) non-game fish--among these are lamprey eels (Willamette Basin Task Force 1969: II-4, II-5, II-6).

The wildlife found in the road area includes: (1) big game, (2) upland game, (3) furbearing animals, (4) waterfowl, and (5) predators. Several of the big game animals became food for travelers along this route; others, such as the bears and cougar, may have at times seemed to be obstacles to travel.

Big game: *Odocoileus hemionus columbianus* (black-tailed deer), *Odocoileus hemionus hemionus* (mule deer), *Odocoileus virginianus* (white-tailed deer), *Cervus canadensis roosevelti* (Roosevelt elk), *Ursus americanus* (black bear), *Ursus klamathensis* (grizzly bear), and *Felis concolor* (cougar).

Upland game: *Phasianus colchicus* (ring-necked pheasant), *Perdix perdix* (Hungarian partridge), *Loghorthyx californicus* (valley quail), *Colinus virginianus* (band-tailed pigeon), *Columba fasciata* (band-tailed pigeon), *Zenaidura macroura* (mourning dove), *Dendragapus obscurus* (blue grouse), *Bonasa umbellus* (ruffed grouse), *Sciurus griseus* (gray squirrel), *Lepus americanus* (snowshoe rabbit).

Furbearers: *Procyon lotor* (raccoon), *Ondatra zibethica* (muskrat), *Castor canadensis* (beaver), *Mustela vison* (mink), *Mustela frenata* (long-tailed weasel), *Martes americana* (marten), *Martes pennanti* (fisher), *Lutra canadensis* (otter), *Mephitis mephitis* (skunk), *Spilogale gracilis* (spotted skunk).

Waterfowl: *Branta canadensis* (Canada goose), *Anas platyrhynchos* (mallard), *Anas acuta* (pintail), *Anas carolinensis* (green-winged teal), *Anas discors* (blue-winged teal), *Aix sponsa* (wood duck).

Predators: *Vulpes fulva* (red fox), *Procyon cinereoargenteus* (gray fox), *Gulo luscus* (wolverine), *Canis latrans* (coyote), *Canis lupus* (gray timber wolf), *Lynx rufus* (bobcat), *Haljaetus leucocephalus* (bald eagle), and *Aquila chrysaetos* (golden eagle).

A few of these species such as the ring-necked pheasant, the Hungarian partridge, and the bobwhite quail are introduced (Willamette Basin Task Force 1969: II-153; Bailey 1936).

Climate

The climate of the region traversed by the Oregon Central Military Wagon Road is characterized by generally mild winters, moderately warm summers, and, west of the summit of the Cascades, by heavy annual precipitation which primarily occurs during the winter. The western slopes of the Cascades receive heavy rainfall as the cloud systems, usually moving from west to east, confront the mountains. The precipitation is lowest in the valley bottoms but increases with the elevation. The average temperatures, on the other hand, are higher at the low elevations and decrease with the higher elevations.

The precipitation varies from 40 inches in the Willamette Valley to as much as 140 inches a year on the higher peaks of the Cascades. At 4,500 feet elevation the snow cover is laid down by December each year and remains until April. At Emigrant Pass the snowfall may block the route nearly half of the year. The prime travel months on the old road were from May through early November (Legard and Meyer 1973: 59).

East of the Cascades the precipitation shows a marked decrease. Streams flow out of the mountains into the lava plains of the Deschutes watershed and feed the system. Both rainfall and snowfall are markedly less than a few miles to the west beyond the summit. The temperature extremes are more pronounced with many more days below freezing each year and the possibility of a freeze exists for any night during the year. Similarly the mean summer temperatures include many days warmer than west of the mountains with several in the 90's and some over 100 degrees (Loy 1976: 138-39).

III. HISTORIC BACKGROUND

Introduction

The Oregon Central Military Wagon Road was the product of several events in the mid-nineteenth century. Its development related, in part, to the increasing commitment of the federal government to the new territories and states along the Pacific Slope and, especially in the 1860's, to concerns about improved transportation for possible military purposes. The road was also the result of the growing interest of inhabitants of the Willamette Valley with the resources of the vast and largely uninhabited parts of Oregon beyond the Cascade Mountains. More immediately the road promised to provide significantly improved transportation to the newly discovered mines in the center of the state and along the Idaho border.

By 1864 the upper Willamette Valley had experienced a decade and a half of intense growth. In 1846 Elijah Bristow and Eugene Skinner arrived at the head of the valley and staked their land claims. Near Bristow's cabin on the Middle Fork of the Willamette developed the rural community of Pleasant Hill. Skinner's farm became the townsite of Eugene, Oregon. These men were quickly joined by dozens of other settlers who filed upon free land under the Donation Act of 1850. By 1860 Lane County's population was 4,780. Settlers had pushed into the foothills of the Cascades and the Coast Range. They had communities on the upper Siuslaw at Lorane, at Cottage Grove on the Coast Fork of the Willamette, at Coburg on the lower McKenzie River, and at several other locations among the rolling hills of oak groves and grasslands of the upper Willamette (Beckham, Minor and Toepel 1981).

Since the passage of the Meek Wagon Train through eastern and central Oregon in 1845, tales had circulated about the fabled but lost "Blue Bucket Mine." Repeatedly prospectors tried to find the place where allegedly children in this emigrant party had picked up a fortune in gold in their blue, metal pail. In August, 1861, however, prospectors found gold at John Day and Canyon City in what was to become Grant County. Reports of their success prompted a gold rush to the region and caught the interest of farmers in the upper Willamette Valley who had surplus livestock and grain which they hoped they might sell to a hungry mining population. What was needed was a good road across the Cascades (Bancroft, vol. 2, 1888).

A further inducement for interest in the region east of the Cascades was the growing awareness in the 1860's of the lush grasslands and the potentials for stock raising in that area. The reports of John Fremont of the 1840's and the explorers who in the 1850's had passed through the region to carry out the Pacific Railroad Surveys contained scientific authority that good lands existed in the midst of the desert. Others knew first hand that in the Basin section of Oregon were beautiful lakes whose shores were covered with thousands of acres of fine grass. The key ingredient to settlement and prosperity for those who

might move into central and southeastern Oregon was a good road. They could drive their wagons over it to haul in their families and possessions. A road would create a means for the transportation of livestock to new ranches or to market. The military could, if necessary, hurry along such a route to provide protection from the Indians if hostilities should break out.

The Role of the Federal Government

With the passage of the Organic Act in 1848 and the establishment of the territorial government of Oregon in 1849, the federal government began an era of steady assistance to the young community of American citizens on the shores of the Pacific. First came the territorial officers. These presidential appointees included a governor, secretary, and judges. They put in place part of the government for the territory, while the local citizens elected a legislature to enact laws to govern life in Oregon. Joseph Lane of Indiana and a succession of political appointees filled the post of governor until statehood in 1859 (Bancroft, vol. 2, 1888).

In 1849 the U. S. Army dispatched the mounted riflemen, a contingent which marched across the Oregon Trail, to establish military posts in the western part of the territory. The first post was Fort Vancouver near the confluence of the Willamette and Columbia rivers. With mounting tensions with the Indians, the Army established other forts in the 1850's. These included Fort Lane in the Rogue River Valley, Fort Orford on the southern Oregon coast, Fort Dalles at the western edge of the Columbia Plateau at the base of the Cascades, and three posts to encircle the Siletz and Grand Ronde Indian reservations: Fort Umpqua, Fort Hoskins, and Fort Yamhill (Settle 1940; Barth 1959: 197-215; Knuth 1966: 292-346).

The government also established in 1849 the Oregon Superintendency of Indian Affairs. This office was to secure peaceful relations with the various tribes and, commencing in 1851, to obtain the cession of their lands and their removal to reservations. The success of the Superintendent in these labors was checkered. Many of the treaties failed to gain Senate ratification and repeatedly in the years 1851-56 hostilities broke out between the settlers and the Indians in the western part of the territory. So difficult were these times that additional soldiers were sent in from California. The Army commanders found that transportation routes were poor and that both troop movement and passage of supplies to the hungry men in the field were hampered by lack of roads (Beckham 1977: 111-45).

To remedy the difficulties of the army in terms of transportation of troops and supplies, Congress moved toward a program of military road construction in Oregon Territory. Joseph Lane, territorial delegate to Congress in 1852, secured introduction in Congress of an appropriation bill for roads in Oregon. On January 7, 1853, President Millard Fillmore

signed this act making \$20,000 available for the survey and building of roads from Fort Walla Walla to Steilacoom in what was later to be Washington Territory and from Myrtle Creek to Camp Stewart. The latter road was to connect the Umpqua Valley to the mining region near Jacksonville in the Rogue River Valley. Congress subsequently appropriated an additional \$20,000 to extend the road from Myrtle Creek down the Umpqua Valley to Scottsburg at the head of tidewater on the Umpqua (Jackson 1949: 7-11; 1952: 72-75).

In 1853-54 surveyors laid out the military road from the navigable head of transportation on the Umpqua estuary to the Rogue River Valley. The section from Myrtle Creek to Camp Stewart was surveyed by Major Benjamin Alvord of the U. S. Army and by Jesse Applegate, a civilian and settler in the Umpqua region. Lt. John Withers was responsible for surveys from Scottsburg to Myrtle Creek. Although civilian contractors cleared much of the route, the army presence continued through inspection and supervision of the projects. The involvement of the federal government in southwestern Oregon had been pivotal in the improvement of transportation. Several sections of this new military road soon became part of the Oregon and California Stage Road. By the 1970's Interstate Highway Five ran along much of the old route as well (Jackson 1952: 72-75).

In 1854 Congress appropriated \$30,000 for the survey and construction of a military road from Astoria at the mouth of the Columbia River to Salem, the territorial capital in the Willamette Valley. The mounting pace of road construction led the War Department that year to establish through the Topographical Corps a superintendency of Pacific Roads in San Francisco. Lt. George H. Derby of this office came to Oregon in 1855 to commence the projected Astoria-Salem Military Road (Jackson 1952: 75-76; Clark, vol. 1, 1927: 487-89).

Proposals in 1856 for the appropriation of \$96,000 for more road projects in western Oregon brought heated debate in Congress over the appropriateness of federal funding of road projects in the territories. Ultimately the Oregon lobby triumphed and in January, 1857, more dollars poured into the territory for more construction and bridging on the routes from Scottsburg to Camp Stewart and from Astoria to Salem. Late in 1857 the Army commanders in Oregon Territory realized that they might need to ship troops and supplies into the Great Basin where troubles were mounting with the Mormons. General William S. Harney in 1858 dispatched Capt. Henry D. Wallen to carry out a reconnaissance from Fort Dalles to the Great Salt Lake through the country south of the Blue Mountains. (Jackson 1952: 84-85).

The government commitment to road work was clearly witnessed in Captain Wallen's expedition of 1858. His support crew included nine officers, 184 enlisted men, 154 horses, 344 mules, 121 oxen, 30 wagons, and an ambulance. Historian W. Turrentine Jackson has remarked: "This party was undoubtedly the largest and best equipped of any engaged in wagon-road survey and construction for the United States Army in the trans-Mississippi West." Wallen's party ascended the Deschutes River

to the Warm Springs River, followed the Crooked River to its headwaters, explored the Harney Basin, and moved on east to Fort Boise. Although these men passed through a vast and largely unknown part of Oregon, they did not find a suitable road as an alternative to the Oregon Trail which passed to the north and through the Blue Mountains. General Harney was willing to persist and in 1860 proposed to send out more army men to continue the explorations. He also intended to have this party return by way of Lake Harney and move directly westward to Diamond Peak. His intention was for the contingent then to descend the Middle Fork of the Willamette River to Eugene. Harney's plan did not get carried out because of the growing crisis of the Civil War (Jackson 1952: 86-88).

The federal government was also interested in the construction of a transcontinental railroad and connecting rail systems in the American West in the 1850's. Congress provided for a series of five major surveys in 1853; the projects were to be directed by the Secretary of War and designated field commanders. Part of the Oregon surveys were carried out by Lt. Robert S. Williamson of the Topographical Engineers. In August and September, 1855, after explorations in the Klamath Basin, Williamson brought his men to the upper Deschutes Valley to mount a series of expeditions into the Cascades (Williamson and Abbot 1857: 76-82).

On September 28, 1855, Williamson, accompanied by Lt. George Crook and Lt. Philip Sheridan and others of his detachment, left the Deschutes and turned west into the mountains. The party ascended the ridge south of Crescent Lake. Williamson wrote:

The summit is attainable at a moderate grade, by winding, as the hill sides appear practicable. In descending we saw to the south of us a large lake, five or six miles in diameter, which is the source of the Middle fork of the Willamette. We descended on a ridge, in many places impracticable for a railroad; but a descent could be made to the lake, by side location and winding to gain distance. Thence the route would follow down the Middle fork, possibly through a canon, and doubtless through an immensely difficult ravine.

This army party followed the traces of an overland emigrant wagon route which had been blazed in 1852. The men took seven days to travel by horseback from the Deschutes to Spores' Ferry on the McKenzie River near Coburg. Their reconnaissance resulted in the journal of their explorations which was published in the multivolume *Pacific Railroad Reports* (Williamson and Abbot 1857: 76-82).

In 1850 Congress passed an act establishing the office of Surveyor-General of Oregon Territory and setting in motion the operations of the General Land Office. Through this agency the government mounted an ambitious program of land surveys. Each year surveyors went out from the

General Land Office to establish township corners and prepare the Cadastral Survey maps of the territory. These explorations added measurably to the understanding of the region. The Cadastral Survey maps contained information on trails, roads, ferries, house and barn locations, vegetation distribution, improved lands, river courses, and summary notes on the quality of the lands in the township. These projects commenced in February, 1855, along the lower Middle Fork of the Willamette River and by 1857 had reached Big Meadows, later the site of Oakridge, Oregon (Murphy and Murphy 1854; Patterson and David 1856-69).

In 1858-59 the territorial legislature of Oregon petitioned Congress to establish an Indian agency in the Klamath Basin and to send in permanent military forces to garrison the region. Although delayed by the Civil War, the fort was authorized in 1863. In 1864, J. W. Perit Huntington, Superintendent of Indian Affairs in Oregon, negotiated the Klamath Treaty. This agreement provided for land cessions and the establishment of the Klamath Reservation; it was ultimately ratified and proclaimed on February 17, 1870. Through these actions the federal government had established a presence in south-central Oregon and created a need for both military and Bureau of Indian Affairs personnel to get back and forth to the Willamette Valley (Stern 1966: 39-42).

On several occasions between the Organic Act of 1848 and the establishment of a military post in the Klamath Basin in 1864, the federal government had taken actions which would have bearing on the development of the Oregon Central Military Wagon Road. The federal government had sent in funds and employees. Congress had appropriated monies for road surveys and construction. The Bureau of Indian Affairs had through the Oregon Superintendency established relations with the various tribes of the region. Government explorers had looked over the Middle Fork of the Willamette as a possible rail-road route. Cadastral surveyors from the General Land Office had noted the features of the land and had paved the way for settlers to gain title to their claims. The final step was the passage of an act to grant lands to a company to build a road via the Middle Fork of the Willamette to connect the Willamette Valley with central and southeastern Oregon.

The Challenge of the Cascades

Although fur trappers employed by the North West Company and the Hudson's Bay Company were among the first Europeans or Americans to seek out the river canyons of Oregon's western Cascade Mountains, no documentary record survives of their having traversed that range during their labors. By 1845, however, a new impetus was at work to lead men into the mountains to seek passes among the peaks. In 1843 over 900 emigrants had crossed the Oregon Trail. During the last weeks of their journey they had endured the hardships of crossing the Columbia Plateau and braved the wild rapids of the Gorge where the great

"River of the West" cut through the Cascades toward the sea. The trials of that journey and the loss of lives prompted several to seek out alternative routes. Among the hopes of those who wanted to open other roads was the prospect of a suitable wagon road via a pass in the Cascade Mountains.

These motivations led Dr. Elijah White, a sometime missionary and aspiring politician, to form a company of men in 1845 to explore the upper Willamette Valley and locate a pass through the mountains for emigrant use. Residents of the region subscribed \$2,000 to fund the project. On July 12, White, accompanied by Joseph Gale, Baptiste du Guerre, John Edmonds, Orris Brown, Moses Harris, and John C. Saxton set out along the Cascade foothills for several weeks of explorations. They attempted at several points to locate a way through the mountains but failed. Instead they journeyed to the head of the valley and turned north again along the base of the Coast Range. They were able to spy out a trail over the mountains to Yaquina Bay on the coast (Bancroft 1886: 29; 484).

In the fall of 1845 emigrant parties coming west on the Oregon Trail heard of a new short cut through Central Oregon to the Willamette Valley. Stephen H. L. Meek, a brother of the better known mountain man Joe Meek, was on the trail that year with his wife. Meek, a guide for a small party coming west in 1842, became increasingly confident that a road might be laid out west of Fort Boise which would take emigrants quickly across Oregon and avoid the Blue Mountains and the Columbia Plateau and Gorge. Meek was able to persuade between 1,000 and 1,500 emigrants to follow him and take the "Meek Cutoff" to the Willamette Valley. The trials which befell these pioneers were terrible. Hunger, thirst, dust, lack of feed for their livestock, and the immense labor of cutting and opening a new wagon road were their lot. After weeks of wandering the party reached the Deschutes River and decided that the only way to survive was to turn north and regain the Oregon Trail and face the rigors of the Columbia Gorge. Perhaps as many as twenty-five died during this trek (Clark and Tiller 1966).

That same year, 1845, Samuel K. Barlow and Joel Palmer arrived at the base of the Cascade Mountains and soon developed the resolution to find a way across the mountains which would avoid the dangers of the Columbia Gorge. Eventually joining forces, these explorers and several families of emigrants laboriously worked their way with their wagons up the forested slopes on the east side of the Cascades. Finally with winter threatening and snowfall imminent, Palmer and Barlow climbed far up the slopes of Mount Hood and, at last, found a precipitous route into the watershed of the Sandy River. The emigrants of 1845 were compelled to abandon their wagons near the base of Barlow Pass east of the mountains and hurry on to the Willamette Valley with pack animals and only a few of their possessions. The next spring, however, Barlow was able to bring the wagons on through and opened the Barlow Road. This toll route operated until 1919 as an important artery of commerce and travel across the Cascades (Palmer

1847; Beckham 1978).

Others beside Barlow anticipated opening roads over the Cascades in the 1840's. In the same legislative session of December, 1845, when Barlow received his toll road charter, Thomas McKay, a stepson of Dr. John McLoughlin of the Hudson's Bay Company, gained a similar franchise for the opening and operating of a toll road between Albany, Oregon, and Fort Boise via the Santiam River. In July, 1846, McKay and ten associates attempted to find a pass on the headwaters of either the North or the South Santiam but failed (Bancroft 1886: 531-32).

In the spring of 1846, still determined to be a pathmaker, Stephen Meek sought a franchise from the legislature also to open a route from the Willamette Valley to Fort Boise. Many remembered his disastrous cutoff of the previous fall; the legislature rejected his bid. In March, 1846, however, several settlers in the Willamette Valley went to its upper reaches to try to find a pass over the mountains to the east. These explorers included J. M. Garrison, J. B. McClane, Thomas Holt, James P. Martin, J. W. Boyle, A. R. C. Shaw, and Moses Harris. The men were not successful (Bancroft 1886: 532).

Temporarily the drive to find an alternative to the Oregon Trail over the Columbia Plateau was slowed by the opening in 1846 of the Applegate Trail or Southern Emigrant Route. This road was explored by several who had traveled to Oregon in 1843. They headed south through the valleys of the Willamette, Umpqua, and Rogue before turning east over the southern Cascades to the Klamath Basin. Their route then dipped south into northern California and Nevada and through the Humboldt Sink where it intersected with the California Trail west of Fort Hall. With regularity but considerable difficulty emigrants used this route each year to continue their journey into western Oregon (Helfrich 1976).

The determination to open a new route surfaced in the Territorial Legislature in December, 1851, with the introduction of House Bill No. 16. This measure authorized the appointment of commissioners "to view the practicability of a road from Willamette Valley, at some point between the south fork of the Santiam river and the McKinzy's fork of the Willamette river, across the Cascade Range." The bill with amendments became law in January, 1852, and provided that the government would spend up to \$600 for the explorations. On January 13, 1852, House Bill No. 31 was heard in the legislature to "provide for a wagon road across the Cascade mountains south of Mt. Jefferson. . . beginning on the south branch of the Santiam River." No further action was taken on this new bill. No record survives as to whether the commissioners named in the first law actually carried out a reconnaissance (Menefee and Tiller 1976: 319-21).

In March, 1852, several residents of Lane County gathered to plan for their own explorations of the Cascades. After several subscribed funds and others pledged to provide their own horses and pack animals,

they returned to their farms until the summer sun had melted the snow known to be in the distant mountains. Twice, however, preliminary exploring parties went out to seek a route. In the July expedition William Macy and John Diamond ascended the Middle Fork of the Willamette. They climbed a large a mountain, later known as Diamond Peak, and looked down on the verdant Klamath Basin to the east. Finally in August the full party of seven road viewers set out and explored a route via the Middle Fork of the Willamette River to the Deschutes watershed and east to the Oregon Trail. They found traces of the route of Meek's ill-fated wagon train of 1845 (Menefee and Tiller 1976: 327-40).

During the summer of 1853 several parties from the upper Willamette Valley passed back and forth along the Middle Fork of the Willamette River. These men continued the explorations for a suitable wagon road and commenced construction of the Free Emigrant Road. They were determined that their route would serve overland emigrants and would bring them almost due west from Fort Boise to the upper Willamette Valley. Their labor was contracted by the commissioners of Lane County who calculated that the road could be opened in 65 days (Menefee and Tiller 1977: 60-61). In the fall of 1853, after enduring great difficulties, the emigrants began their passage over this road via the route along the south flank of Diamond Peak. W. W. Bristow of Pleasant Hill counted 615 men, 412 women and children, 3,970 cattle, 1,700 sheep, 222 horses, and 64 mules on the road that year (Menefee and Tiller 1977: 147).

The tribulations of the Free Emigrant Road were so great that the route gained a bad reputation during its first year of use. In 1853 an estimated 1,500 people with between 250 and 300 wagons had tried this route to western Oregon. Many had been compelled to abandon their possessions and wagons in the mountains. One who had witnessed the trials of this route wrote on October 26, 1853, in Eugene: "Near the summit of the mountain all the loose stock of the trains, some 800 to 1000 in number were all crowded together trying to pass the long column of wagons the largest number strayed off into dense forests and many it is feared will never be found . . ." (Menefee and Tiller 1977: 324).

Some enthusiasm however remained in the upper Willamette Valley for a route via the Middle Fork of the Willamette. On June 10, 1854, a number who favored the road met in Eugene. James D. McFarland addressed those assembled and proposed that the meeting was "for the purpose of making an effort to complete the opening, west of the summit of the Cascades, and to locate correctly east of Des Shutes, the new emigrant road leading into the Willamette Valley, through the passes at the head of the middle fork." Later in 1854 William Macy set out east over the road, relocated part of it east of the Deschutes, and led more emigrants over it into the Willamette Valley (Menefee and Tiller 1977: 329-31).

In 1855-56 growing difficulties with the Indians of western Oregon and Washington may have served to check interest in further development of the Free Emigrant Route. Certainly those conflicts drew off available manpower to cut and clear the road. By October, 1855, hostilities were raging in the Rogue River Valley of southwestern Oregon. These conflicts spread to the coast in February, 1856, and prompted hundreds of settlers to form volunteer companies in the Willamette Valley to go into battle with the native inhabitants of the territory (Beckham 1971: 147-91).

Intermittent use of the Middle Fork of the Willamette River, however, continued through the late 1850's. The tales of the "Blue Bucket" nuggets, allegedly found by children on the Meek Wagon Train in 1845 in central Oregon, fueled some of these activities. Gold discoveries in Washington Territory east of the Cascades also played a part. On September 1, 1855, a contingent of prospectors met Lt. Henry Abbot of the Pacific Railroad Surveys on the eastern flank of the Cascades in the upper Deschutes region. Abbot wrote: "To-day we were greatly surprised by the arrival of a party of gold seekers from the Umpqua valley who were journeying to the Coleville mines. They had crossed the Cascade Range by the wagon road south of Diamond Peak . . ." (Williamson and Abbot 1857: 74).

In 1857 Dr. James McBride of Yamhill County set out with a party from The Dalles to find the Blue Bucket Mine in central Oregon. When the group ran into hostile Indians, the men turned back and crossed the Cascades to descend the McKenzie River to the Willamette Valley (Bancroft 1888: 479). In August, 1858, McBride tried once again to locate the "lost" mine and headed east via the Free Emigrant Route and the pass at Diamond Peak (Menefee and Tiller 1978: 31).

In May, 1860, another prospecting party formed at the "Forks of the Willamette" (probably at the confluence of the Middle and Coast forks) with the intention of crossing the Cascades to seek gold in the Blue Mountains. J. W. Swank, a member of this party, kept a diary of its explorations. Swank noted that the men departed from their base camp on May 10 in a downpour of rain. The way over the Free Emigrant Route along the Middle Fork was exceedingly difficult. "Start early travel some ten miles and noon here we leave the wagon road and make our own trail," he wrote on the eleventh. "have some ill luck horses roll down the hill snows and rain all evening get to camp at dark 18 miles in all." (Swank 1860).

On two different days when ascending the Middle Fork this party encountered Klamath Indians coming over the route. Perhaps Indians had used this trail for centuries. On May 16, Swank wrote: "This morning we started to cross the Summit found the snow too deep sent the horses back to the pine opening a part remains to break the trail snowing." After two arduous days of tramping a route through the snow, estimated to be from five to 30 feet deep, Swank wrote that

the men arrived at the Deschutes River "much fatigued." After explorations in the Harney Basin, Swank's party turned back and re-crossed the Cascades near the foot of one of the Three Sisters. He took the Mohawk Trail to the Calapooya and arrived home near Brownsville in Linn County on June 23, 1860 (Swank 1860).

The repeated seeking for gold by prospectors at last brought luck in 1861. That year several expeditions traveled in the Blue Mountains and the John Day River watershed. Late in the summer a party made up of J. L. Adams, William Cranston, Alex Rogers, and James Clinton found gold on what they thought was the upper Malheur River. Within weeks others also found rich prospects in the region along the Powder and the John Day. By fall and early winter a gold rush was well underway as miners flocked into the new diggings (Bancroft 1888: 483-84).

Genesis of the Oregon Central Military Wagon Road

By the fall of 1861 the stage was set for the building of the Oregon Central Military Wagon Road over the Cascades by way of the Middle Fork of the Willamette River. Government explorers had viewed much of central Oregon and had reported in published accounts about the region's resources. Gold seekers had traversed the Cascades and had finally found rich deposits. Overland emigrants had passed through the region; many carried memories about the potentials for stock raising in such places as the Ochoco or the valleys of the Crooked River and the Deschutes. Military personnel such as those under Lt. Mullen had encountered hostile Indians. All that was lacking was a spur of potential profit to lure road builders into the field.

Although work on the Free Emigrant Route languished after 1854 and use of the road was primarily by pack animals, a number of residents of the upper Willamette Valley were yet convinced of the value of a route over the Cascades. In 1862 Felix Scott, Jr., one with that vision, solicited the assistance of 50 or 60 men to help him build a road via the McKenzie River into central Oregon. At that time the county road extended a short distance beyond Vida on the McKenzie. During the summer of 1862 these men labored in the forests and the lava beds atop the pass cutting and clearing a way. By fall they had made sufficient improvements in the road to drive 900 head of cattle and nine wagons over the pass (Menefee and Tiller 1978: 43).

The labors of Scott and his party were enough to give the McKenzie Road an initial edge on traffic between the upper Willamette Valley and the area east of the Cascades. On June 18, 1864, the *Oregon State Journal* of Eugene, Oregon, noted:

During the week several families and wagons, among which were some large ox teams, left here for the John

Day mines. They go over the McKenzie road. Persons lately arrived from Canyon [City] by that route, state that they met quite a number of wagons on the road in various places. They are getting along very well. Already the travel between here and the mines, in wagons, droves of stock and pack animals, is becoming quite an important feature in the business of the country, and will surely increase, as the roads are improved, until Eugene will rival the Dalles as a depot of mining supplies (Anonymous 1864a).

During that summer considerable energy was expended to make further improvements on the McKenzie River route. In July crews graded many miles of the road, while the press in Eugene touted the route's virtues in accelerating real estate values, stimulating the flow of farm commodities, and being a free road open to all travelers (Anonymous 1864b). By October, 1864, the road was graded a distance of 60 miles east of Eugene with only 20 miles of pack trail remaining over the summit. The *Oregon State Journal* reported that W. A. Masterson, a longtime resident of Lane County, had left Boise with 50 wagons of emigrants who intended to come to the Willamette by way of the McKenzie Road (Anonymous 1864c).

In spite of the favorable reports and developments of the new road by way of the McKenzie Pass, some citizens of Eugene and Springfield were still determined that the Middle Fork of the Willamette held great potential as the major route to central and southeastern Oregon. Undoubtedly their inspiration was in part a product of the change of philosophy by Congress about the building of military roads after 1860 in the American West. Part of the change of philosophy by Congress was influenced by Oregon's gaining statehood in 1859. After that date the legislative body in Washington, D. C., no longer made direct appropriations to pay for road building in the state. Instead Congress began a program of granting land allotments from the public domain. On July 2, 1864, Congress passed an act (13 Stat. 355) granting to the State of Oregon alternate sections of land, designated by odd numbers, three sections in width on each side of a military wagon road to extend from Eugene to Boise, Idaho (U. S. Senate 1887: 2-3).

Some of the optimistic backers of the Middle Fork route in Oregon possibly had an indication by the early spring of 1864 that Congress was going to act favorably on a land grant bill for a route over the Cascades by way of Emigrant Pass south of Diamond Peak. In April a group of investors from the Eugene-Springfield vicinity filed their articles of incorporation with the Secretary of State and began sale of stock to finance such a route. Less than a week before Oregon newspapers had carried notice that the bill for a land grant road by way of Diamond Peak had passed the Senate and was likely to gain favorable assent in the House of Representatives. The incorporators of the road company announced plans to put explorers into the mountains by June at the latest. "This looks like business," noted the editor

of the *Oregon State Journal*, "and evinces a determination on the part of our citizens that knows no such word as fail" (Anonymous 1864d, e).

The Act providing for the transfer of public lands to the State of Oregon for the subsidy to stimulate the building of the Oregon Central Military Wagon Road read as follows:

Be it enacted, That there be, and hereby is, granted to the State of Oregon, to aid in the construction of a military wagon road from Eugene City, by way of Middle Fork of the Willamette river, and the most feasible pass in the Cascade range of mountains, near Diamond Peak to the [southern or] eastern boundary of the State, alternate sections of public lands, designated by odd numbers, for three sections in width on each side of the road: Provided that the lands hereby granted shall be exclusively applied in the construction of said road, and shall be disposed of only as the work progresses; and the same shall be applied to no other purpose whatever. And provided further, That any and all lands heretofore reserved to the United States by act of Congress or other competent authority, be and the same are reserved from the operation of this act, except so far as it may be necessary to locate the route of said road through the same, in which case the right of way is granted.

Sec. 2. And be it further enacted, That the said lands hereby granted to said State shall be disposed of by the Legislature thereof for the purpose aforesaid, and for no other; and the said road shall be and remain a public highway for the use of the Government of the United States, free from tolls or other charge upon the transportation of any property, troops, or mails of the United States.

Sec. 3. And be it further enacted, That said road shall be constructed with such width, graduation, and bridges, as to permit of its regular use as a wagon road, and in such other special manner as the State of Oregon may prescribe.

Sec. 4. And be it further enacted, That the lands hereby granted to said State shall be disposed of only in the following manner, that is to say: that a quantity of land not exceeding thirty sections for said road may be sold; and when the Governor of said State shall certify to the Secretary of the Interior that any ten continuous miles of said road are completed, then another quantity of land hereby granted, not to exceed thirty sections, may be sold, and so from time to time, until said road is completed; and if said road is not completed within five years, no further sales shall be made, and the land remaining unsold shall revert to the United States (Anonymous 1864d).

In spite of the improvements to the McKenzie Road, a number of miners and cattle drovers in the Upper Willamette Valley continued to use the Free Emigrant Route. Throughout April, 1864, a series of small parties from California and southern Oregon came to Eugene to depart for the mines of eastern Oregon by way of the Middle Fork route. In mid-month 75 men camped at Big Prairie (later the site of Oakridge). Many miles to the southeast more men were at work breaking a trail through the snow over the summit. An anonymous newspaper writer noted: "We have not heard of any starting over the McKenzie trail yet, and as the Middle Fork pass is considerably the lowest, miners and packers will find it preferable at present." This matter of altitude was especially important to those who were driving livestock through the Cascades to the mines (Anonymous 1864f).

The pace of activity on the Middle Fork route increased in June, 1864. In the second week of the month, B. J. Pengra, Surveyor-General of Oregon and a principal investor in the new Oregon Central Military Wagon Road Company, set out with seven other men to survey the new road which the company intended to build along the Middle Fork of the Willamette. That same week N. A. Trobridge of Canyon City set out over the route with 160 head of cattle he had purchased in the Umpqua Valley (Anonymous 1864g). After a dozen days in the field the explorers returned to Eugene. They had traveled as far east as Big Prairie, an estimated 47 miles, and had returned along the south bank of the Middle Fork to examine the desirability of that area for a road. William Odell, the company's surveyor, was optimistic that the road could be built with relative ease and modest cost (Anonymous 1864h).

A complete list of the initial investors in the new wagon road company can not be found. Differing newspaper accounts, however, identified a number of the investors in 1864: B. J. Pengra, G. W. Colby, John Boggs, N. D. Rideout, W. H. Parke, R. F. Parke, Edgar Mills, E. B. Pond, Nicholas Laning, W. C. Belcher, F. B. Simpson, J. W. Peck, Isaac Allen, B. F. Baker, M. P. Jones, D. H. Holbrook, Isaac Lehman, A. D. Breed, D. M. Risdon, J. B. Underwood, and Eugene F. Skinner (Bruce 1936: 16-17). The summer surveys and political influence of these men led on October 24, 1864, to the granting to the Oregon Central Military Wagon Road Company the lands allotted by the federal government to the state. The state legislature conveyed all rights of way, lands, privileges and immunities available under the Act of Congress of July 2, 1864 (Bruce 1936: 18).

Building the Oregon Central Military Wagon Road

Supported with the exclusive franchise to build the road, the Eugene-based company in December, 1864, decided to expand its capitalization from \$30,000 to \$100,000. The realities were that the confirmation and transfer of lands would not occur until several miles of the road had actually been constructed. The company need to hire

surveyors, axemen, bridge builders, packers, and cooks to put its crews into the field in 1865. Further, bridging streams or constructing ferries required either the purchase and hauling of lumber or else manufacturing it at the site. The company was also successful in December in securing the cooperation of Representative John R. McBride who introduced legislation to provide for lieu lands for the company in light of the many sections along the first twenty miles of the road which had already been taken by settlers. The McBride bill failed, but it was a sign that the company had a friend in Congress (Anonymous 1864 i; Bruce 1936: 19).

The expectations for the new road mounted when in April, 1865, word reached Eugene about new gold discoveries in the Owyhee watershed along the Idaho border in southeastern Oregon. The editor of the *Oregon State Journal* wrote:

In view of these facts, the work undertaken by the Oregon Central Military Road Company is of the utmost importance, not only to the people of Lane and adjoining counties, but to the people of the entire State, or at least all that portion of it lying west of the Cascade Mountains, from Portland to the Rogue River Valley and the people of Portland and in the whole Willamette Valley are especially interested in the success and speedy completion of this work. Whether the trade of the immense mining region east of here, shall flow through this valley by way of the Columbia river and Portland or by way of Yaquina Bay or any other port in Oregon, is certainly a matter of the first importance to the State. The future growth and prosperity of the State depends to a great extent on the success of this enterprise, or on the speedy opening of trade and travel between the Willamette Valley and the mining regions of Eastern Oregon and Idaho (Anonymous 1865a).

On April 8, 1865, the road company levied an assessment of ten percent of the capital stock to raise funds to build the first section of the route to Big Prairie (Anonymous 1865b). During the first week of May the Directors let a contract for construction to Benjamin Simpson, Agent of the Siletz Reservation on the Oregon Coast. Simpson, described as an "energetic businessman," may have embarked upon this venture illegally. As Indian Agent his responsibilities were at the Siletz Reservation where a host of problems involving health, security, education, and subsistence through the agricultural programs remained largely unsolved (Beckham 1977: 147-60). With no mention of his entrepreneurial activities to his superiors, Simpson brought 75 Indian men from the reservation to the Middle Fork of the Willamette River. With these laborers and \$26,000 Simpson was to build 46 miles of road, including bridges from Butte Disappointment to Pine Opening (Anonymous 1865c; Simpson 1866).

During the second week of May, 1865, B. J. Pengra, Superintendent of the Oregon Central Military Road Company, set out with a small party to explore from the summit of the Cascades to the Deschutes River. His plan was to extend the road route from where it had been explored the previous year. The deep snow pack on the summit compelled Pengra to turn back. He and his men had attempted to follow "the old trail" (Free Emigrant Route). Pengra reported, however, that he hoped to find a lower pass through which the new road would be built (Anonymous 1865d; 1865e).

The tempo of events on the road picked up in June, 1865, when Lt. John Marshall McCall arrived in Eugene with an army cavalry escort to accompany Pengra and the surveyors of the road company on their expedition from Diamond Peak to the Idaho border. Colonel R. F. Maury stated on June 27 in his final orders to McCall:

As soon as your party is supplied with the necessary outfit you and your command will provide the military escort for the surveying party of the Oregon Central Military Road. You will be governed in your route by the wishes of B. J. Pengra, the chief of the surveying party, but you alone are responsible for the economy, property and safety of your command, and will, therefore, use every necessary precaution for their care and preservation. The opening of the proposed road is one of importance to Oregon; and every reasonable effort for its successful exploration is enjoined.

McCall's company consisted of 48 enlisted men, 19 civilian employees, and Dr. Brown, "an English gentleman" who was employed by a botanical society in Edinburgh, Scotland (Merriam 1959: 97-98).

According to plans, McCall remained in Eugene collecting supplies and pack animals while Pengra set out once again for the summit to make the surveys through to the Deschutes River. Since the military escort was thought necessary only because of anticipated difficulties with the Indians east of the Klamath Basin, that arrangement was agreeable to all. McCall kept a diary of travel over the newly developed wagon road:

7 [miles]

Camp No. 1
Hd. Qrs. Mil. Escort
to Survey Party, Or.
Cent. Mil. Road
July 17, 1865

Moved today from encampment at Eugene City Or. seven miles. The escort consists of 45 enlisted men Co. "A" 1st Or. Cav., 1 enlisted man Co. "D," 1 Sgt. Co. "B" 1st Or. Cav. and 1 enlisted man Co. "A" 1st Or. Infy. forty eight men in all

We have 75 pack animals. Fifty animals are hired at \$2.50 per day from Mr. H. Owens. Much delay in starting has been caused in fitting up the apparajos, they all having to be stuffed. Also the lash string ropes, etc. etc. had to be manufactured.

15 [miles]

Camp No. 2,
July 18, 1865

Left camp at 6½ o'clock. Moved 15 miles crossing the Coast fork Willamette and also Middle fork and encamped above Jordans, 2 miles. Road good. One mule gave out today and was abandoned.

6 [miles]

Camp No. 3,
July 19, 1865

Left camp at 6 o'clock. Traveled 6 miles up the river, and encamp at what is called "Cabin Prairie." A poor camp. The road runs along the river and the country is generally densely timbered.

7 [miles]

Camp No. 4, Pt.
Lookout
July 21, 1865

Left camp at 5 o'clock and 10 M. [minutes] Road fair for about 5 miles. Here we came to where Ben Simpson is working on the road with his Indians.

Found it difficult to get past the working parties owing to the quantity of timber that is cut down. About one mile from Simpson's Camp is "Point Lookout." Here we found Mr. Larrison at work on the point. I put some 15 or 20 men at work to assist and in two or 3 hours made the road passible for the train. Learning that the road ahead was filled up with timber from a recent storm, I encamped having traveled 7 miles.

It is a poor camp.

8 [miles]

Camp No. 5 Big Prairie
July 21

Left camp at 5½ o'clock. Last night's camp very bad. Sent pioneer party of six men ahead to clear out timber and repair and improve the trail. Command reached camp at 11 o'clock. pack train at 3 o'clock. Had very bad luck, a great many of the mules fell and rolled. One mule, rolled into the river with a cargo, consisting of a keg of vinegar and sugar. They were both recovered

but the sugar much damaged, perhaps one half gone. Also a mule with a cargo of ammunition is missing. Three men are started back to search for it. This is an excellent camp, fine grass, wood and water. Our mules are much jaded with the hard work of the last few days. Traveled 8 m.

5 [miles]

Camp No. 6, Little Prairie
July 22, 1865

Traveled 5 miles today and encamped in this prairie. The lost mule with the ammunition was found by John Hulse cargadora [cargo loader]. It had taken a blind trail in the brush and followed it about a mile from the main trail. The mule was all right.

Sent an express back to Eugene City today to catch us at "Pine Openings" in four days.

The weather is extremely warm and sultry. The road today has not been very bad.

Camp No. 6
July 23rd 1865

Laid over today, to rest the animals, and repack cargo.

8 [miles]

Camp No. 7
July 24, 1865

Left camp early today, 15 m. [minutes] before 5 o'clock. Sent pioneer party ahead with axes and picks. found the trail very bad, a great deal of side hill road, and badly cut by bands of cattle that have been driven over it. The first part of the train got in at 12½ o'clock numbering some 30 animals. An hour elapsed and no more came. Fearing some trouble, what hands were in were sent back, in a short time the report came that some of the animals had fallen from the trail and killed.

It is now 6 o'clock and 2 animals are out yet with cargos. So far as one horse and mule are killed, one cargo of bacon (214 lbs.) 75 lbs flour, one keg syrup.

Some 5 or 6 of the animals fell from the trail, rolling from 30 yds to 300 yds. down a steep rocky hill. None of the animals that were not killed outright seem to be seriously injured.

Camp No. 8
Pine Openings
July 26th

15 [miles]

Arrived here yesterday, distance travelled 15 miles. The trail with one exception is pretty good--at the dangerous place a few of the animals fell, but were not seriously injured. One mule and cargo that was lost on the 24th is still out and two men are in search of it. It being 26 miles from this camp to the DeChutes without any grass and over the mountain, I have lain still today to rest the animals, adjust the cargo rigging, etc., for the trip. The pack animals are falling off in flesh, and must have rest as soon as we get good feed. The men that were in search of the missing mule and cargo have return[ed] without succeeding in finding it. Some bunch grass within two miles of camp has been found that is pretty good.

The command with two days cooked rations will leave in the morning to make the trip to the Dechutes in one day.

Camp No. 9
July 27, 1865.

26 [miles]

Left camp at 7 o'clock and made camp on the DeChutes River at 3 o'clock P.M., a distance of 26 miles with the command. The pack [train] will camp near the Summit, some three miles from the foot of the mountain. The road over the mountain is good. Where it strikes the DeChutes river it is 1200 ft. below the Summit with a very gradual decent. The distance from here to Eugene City is estimated at 100 m[iles].

We met Mr. Pengra and party at this camp. We find feed good.

The character of the country is flat, abounding in lakes and marshes, the higher portion of ground covered with black pine, clover grass in abundance, and great quantities of meadow grounds are in the vicinity.

July 28

The train arrived at 2 p.m. today, all right. Two mules were abandoned on the mountain. They were mules that have not been used since we started. The grass is fine here and the mules will be sufficiently recruited to [go] ahead

in the morning. I am anxious to get to the Klamath Marsh to count up the wastage and replenish my supplies. The wastage and loss so far has been great, owing to the timber on the road tearing packs.

10 [miles]

Camp No. 10
July 29

Left camp this A.M. at 10 m [minutes] to 5 o'clock. The trail ran in an E.S.W. direction over a timbered ridge of Pumice stone. The timber is black pine generally, with occasionally yellow pine. In 10 miles travel we reached the middle fork of the DeChutes, a rapid running stream 20 ft. wide and 2 ft. deep, cold water. The grass is plenty but hard to get owing [to] the dead timber and ground being soft.

July 30 Frost and quite cold.

17 [miles]

Camp. No. 11
July 30, 1865

Left camp at 6 a.m. The ground being so rough we could not get the stock up any earlier. In one miles travel reached South Fork DeChutes. It is a rapid stream of cold water, about the same size of the middle fork. The trail is over timbered ridges with soil of the same character as day before. Nine miles brought us to the trail leading from The Dalls to Fort Klamath, at a fine spring. Here we found indications of some one with a large band of horses having camped the last night, and from character of the horse tracks and mockasin tracks accompanying think it is Indians.

In 8 miles more we arrived at this camp at 11½ o'clock. Trail good. Found Mr. Odell camped here, and Mr. Pengra gone to Fort Klamath, with Huntington, Indian agent, whose camp we saw at the Spring today. (Merriam 1959: 98-102).

The next day, July 31, 1865, Pengra wrote to the Board of Directors of the road company from Fort Klamath: "I have found an excellent pass south of Diamond on a level with Summit Lake, but cannot tell what the exact h[e]ight is--estimate it at from 500 to 700 feet lower than the one where the trail now goes." Pengra thought that construction costs from the terminal point on Simpson's contract to the Deschutes would run close to \$6,000. The road superintendent was ecstatic about the lands east of the Cascades--properties which would be of great value to the company when it sought to sell them. "The greater portion of the grass lands is *marsh meadow*," he wrote, "producing thousands of

tons of wild hay of a quality like that of Illinois, Iowa, etc. There are thousands of acres of these lands before arriving at this marsh" (Pengra 1865).

Pengra kept a detailed account of his explorations for the Oregon Central Military Wagon Road from Emigrant Pass to the headwaters of the Deschutes in 1865. His diary covers the route of the road as it passes over the lands of the Deschutes National Forest:

Wednesday, July 19th

Crossed to the Deschutes river by way of the old trail [Free Emigrant Route]. Found the route quite hilly; made so by a system of ridges which run down to the north from a spur of the mountain, that runs out some distance to the east from the summit. There are points on this mountain ridge which are covered with snow during the entire year; and it is at the base of these ridges and along them at different points that the various branches of the Upper Deschutes head.

Snow has laid upon the summits of the mountains this year much later than usual. We met with extensive drifts of it for some distance along the summit.

In descending to the Deschutes, two beautiful lakes are seen. The one on the south, to our right, we called Summit Lake. It is a fine body of water, surrounded on three sides by high mountains, and over six hundred feet below the summit of the pass, from which we first saw it. It has an outlet into the lake on the north, which becomes nearly dry in the latter part of the summer, and is the head of one branch of the Deschutes. The Lake on the left was called Crescent Lake, on account of its form. It is much larger than the former, and contains fish in great abundance. We estimated its width at three and a half miles, and its length at eight. The road, as surveyed, runs near this lake, and also near the shore of Summit Lake, for several miles. In Summit Lake there is an island of one or two acres, covered over with a heavy growth of timber. There is likewise a diminutive little island in Crescent Lake, which is covered with shrubbery and one small tree. Crescent Lake is 450 feet lower than Summit Lake. Its altitude above the sea is 4,590 feet. Its waters are extremely clear and beautiful. Doubtless it will become a place of resort for pleasure parties who may seek recreation in sailing, hunting, and fishing. The waters from the melting snow of Diamond Peak flow into it from the west. At the north

end of the lake, is an outlet sixty yards wide, which forms a rapid stream of no great depth. It separates soon after leaving the lake, and connects again a mile or more further on, forming a narrow island, which is covered by a forest of black pine. The stream after running a distance of two and a half miles, a little west of north, connects with the outlet of Lake Odell, which flows in from the west, and turns round abruptly to S.S.E., for a mile, and thence runs east along the southern base of a high ridge for three miles, to where it connects with the middle branch of the Deschutes, of which it forms the largest part, and turns north through a gap between the ridge and a high volcanic cone to the south-east.

We camped after a hard day's travel, on the evening of the 18th, on the Deschutes river, at the upper crossing of the old immigrant road. Estimated distance, twenty-six miles.

The time between the 19th and the 28th was spent in exploring for lower and better passes to the north and south of Diamond Peak, making the camp on the Deschutes the base of operations. On the 20th Mr. Odell and myself traversed the country to the south of Diamond Peak, and along the south and west sides of Summit Lake, completing the examination formerly made from the west side. Two good passes were found, one crossing the Summit ridge on the south side of the lake, and one on the north side of equal altitudes, separated by a high rocky ridge, running diagonally between the two, which are some four miles apart.

I preferred the one on the north, on account of the country being more open, and the snow likely to melt earlier in the spring. Being open to the effects of the sun, and wind from across the lake, the snow can never accumulate to so great a depth, and will also be more compact. This route would also be more direct, as it was necessary to avoid the succession of ridges which come down at the east end of the lake, from the spur before spoken of. On the day following we explored the country along the east side of the Crescent Lake; thence around the outlet at the north end, and across the country on to the high ridge several miles to the north. From examinations made from this ridge, I became convinced of the existence of a lower pass (I think lower than any heretofore found in the range) some ten miles north of Diamond Peak, which I determined to examine, if time would permit.

On the 22d we continued the exploration to the south and south-east, where it was desirable the road line should run. Following up the Middle Fork of the Deschutes upon which we were camped, a distance of five miles, we came to a large marsh, about two miles wide and seven long, through which the stream flows. At the lower end of the marsh there is a succession of beaver dams across the stream, and extending out some distance on either side. The marsh is very level, and the dams cause the waters of the stream to overflow in an average depth from twelve to twenty inches. It had been visited earlier in the season by Mr. D. P. Thompson, Deputy United States Surveyor, while prosecuting the public surveys. At that time, portions of it presented the appearance of a lake, and was so set down by him. We found it all overgrown with a common species of marsh grass. It could be easily drained by opening these dams, and made available for meadows or grazing purposes.

This branch of the Deschutes heads in the rivulets which flow down from the snow-ridges at the south end of this marsh.

To the east and, near by, is a high butte, which we ascended for the purpose of overlooking the country east and south. At a distance of five or six miles to the east could be seen the winding course of the east branch of the Deschutes, discernible by the narrow belt of green grass that fringes its borders. Farther on, at regular intervals, could be seen high ridges, trending to the north-east. These ridges have been called spurs of the Blue Mountains, but have no connection with them, being entirely separate and distinct in their every feature. With a strong glass three of them are discernible at different points in this region. They are very regular along their summits. Their north-western sides are steep and precipitous, but from their tops they form high table lands, which slope down gradually, for ten or twelve miles to the east, to the foot of the next ridge. They are generally timbered with a dwarfed species of pine known as black pine (*pinus contorta*). This pine, in favorable localities, forms [sic] beautiful forests, as may be seen in moist places, where the soil is good, in this region. To the south-east from this view may be seen a high point on the nearest ridge, at a distance of thirty miles. Here it terminates at the north end of Klamath Marsh Valley. These ridges must be from eighty to one hundred miles in length. South from this point may be seen the broken

hilly country which intervenes between the waters of the east Deschutes and Klamath rivers. Farther round to the southwest is a long line of snow-capped mountains, which form the eastern front of the Cascade range. They stand in such close proximity to each other in places, and extend to so great a distance along the range, that it is impossible for the beholder to determine their number. It is not generally known that any but the most important ones exist. They line the eastern summits from the Three Sisters to Mount Pitt, a distance of one hundred and fifty miles.

On the 24th, we continued the exploration farther to the south and east, crossing the east branch of the Deschutes on an old Indian trail, which was very dim, though it bore evidence of having been extensively traveled in former years. This crossing is nine miles from the old one on the Middle Fork. Near this point, on the west of the road, is a succession of marshes, through which small streams flow from the Cascades, and connecting, form this branch of the Deschutes. The road here is surveyed along the western base of a volcanic cone, which we ascended, but which afforded no better view than the one ascended the Saturday (9th) previous, to the north-west. In coming to this place, several spring branches were crossed; but on our return, we found some of them dried up.

On the 25th we passed on to the high ridge, at its eastern end, which runs west along the southern side of Summit Lake, hoping to find a pass in that direction through the mountain ridges, down an important stream which flows from Mount Williams into the Middle Fork of the Willamette. On examination, the gap here, which can be seen from the road to the east, was found to bend to the south-west, in the direction of Mount Williams. It was, therefore, thought that no advantage could be gained by its further exploration.

26th. The fore part of the day was spent in examining the soils of the prairie and the timber lands along the Deschutes. In the after part of the day, I passed down the Deschutes, to see the country at the junction of the lake and Middle Fork of the stream, and look for game which abounds in this region. The wild goose is found here at this season of the year, raising her young. Deer are abundant. Some antelope and elk; great numbers of wolves and bears.

Mr. Odell ascended the high butte to the south-east of

camp, from which he discovered a lake, situated to the north of Diamond Peak, previously spoken of.

The entire region, from the summit of the Cascade range east, some seventy or eighty miles, and a hundred miles north and south, is generally covered from one to six feet deep with a light volcanic ash and pumice stone, which have been blown from the numerous buttes that spread out over the country and the surrounding mountains. Underneath this ashy surface is found a brown mould, common to countries where the yellow pine predominates. Upon the sides, and generally upon the tops of these buttes, the timber is yellow and sugar pine, and of a very fair quality, with occasionally a fir. At the base of these buttes, and over the surrounding country of the Deschutes, and to the east and north, the timber is generally black pine. Except near water courses, it is small, ranging from forty to eighty feet in height. In some places it has been killed by fire, and on one account the loose texture of the earth's surface, is turned out at the roots. It is not unfrequently the case that it dies for want of moisture; and falling in every conceivable direction, makes it very difficult passing over the country. This timber, in these localities, is generally found from five to twelve inches in diameter.

There is very little undergrowth in this or the yellow pine forrests [sic] which abound further to the south-east. The reason that the better and larger qualities of timber are found upon the high hills and mountain sides is, that the good soil is nearer, or at the surface, to furnish the required nourishment.

There are several thousand acres of good meadow and good grazing lands along the Deschutes; but they will be of but little consequence for agricultural purposes on the upper branches of the stream for numerous reasons. The country is high, its altitude being 4,450 feet above the sea. The ground is often marshy and filled with the cold water from the perpetual snows of the mountain peaks near by, causing frequent frosts. I suppose that hardly a week passes in summer without them. A large part of the earth in these black pine regions is barren of grass. The more level portions, however, have a light soil forming upon the surface, which produces a small amount of it.

27th. We traveled north-west for the purpose of examining the lake seen the day previous by Mr. Odell, and, if possible, ascertaining the practicability of the pass which I had previously seen in that direction. We estimated the distance to the lake at the time to be fourteen miles, but from further observation I concluded it was only twelve. The lake was ascertained to be eight miles long. I named it after Mr. Odell, who discovered it the day before. Near the shores of the lake the waters are shallow, but farther out very deep. Large numbers of speckled trout were seen near the shore. The water is very clear and pure. The bottom, like those of Crescent and Summit Lakes, is covered with gray granite sand, varied in places with ripples of black sand, common to gold mining regions.

The mountains which extend along the north side of the lake are high. On the west, south and east, they are low and heavily timbered down to the water's edge. The principal timber is yellow fir, interspersed with yew, cedar, hemlock, spruce and quite an amount of pine, new to me. I had seen a few trees of it on the trail west of the summit. The tree is very tall, growing to a height of over two hundred feet, and will average twenty-four inches in diameter. I saw some that would exceed three feet. The body is very round and straight; the bark thin and smooth, like the white fir; the cone small and compact, rather long; the leaf about two-thirds the length of the sugar pine, and the clusters less than one-half their size. The tree, in this locality, has but little top, and no limbs along the body. I suppose it is to be the silver pine.

The outlet to the lake is at the east end, and is near fifty yards wide. The waters descend rapidly for some distance, running over a gravelly bed. This lake could be easily drained.

At the west end of it, there seems to be a low gap, apparently from fifty to eighty feet above the level of the lake. We did not have time to examine it, but from every appearance there must be a pass through the mountains at this point, nearly five hundred feet lower than any before found. The waters of this lake are 4,500 feet above the sea.

The altitude of the old pass, according to the survey of Lieutenant now Major [Robert S.] Williamson, (made I think, in 1857), is 5,595 feet. This agrees with our

own measurement. The pass which I have selected is 5,000 feet; its altitude being nearly 600 feet lower than the old one, and so far as known, is lower than any in use (Pengra 1866a).

Pengra and his party returned to their base camp on the evening of July 27, 1865, to discover that Lt. McCall and the cavalry escort had arrived on the Deschutes (Pengra 1866a). Three days later, joined by J. W. Perit Huntington, Superintendent of Indian Affairs, Pengra and the advance party moved on to Fort Klamath. Huntington intended to seek a conference with Paulina, the principal headman of the Northern Paiutes in south-central Oregon. Paulina's band had been in almost constant conflict with the trespassers on their lands for the preceeding 15 months. Pengra hoped to obtain an understanding with the Indian leader which would permit him to survey and build the road across their territory in peace. Huntington hoped to get a treaty to confirm these new relationships. The wary Paulina, however, was angered by the kidnapping of his wife and children by the superintendent the previous year; he declined to come to Fort Klamath and put off meeting the government officials in the Sprague River Valley for several days. Finally on August 13 he arrived in the explorers' camp for the treaty session (Pengra 1866b; 1866c).

On August 16 the road surveyors split into two parties. Odell, escorted by Capt. William Kelly of the First Oregon Cavalry, moved south and east to follow a route into the Goose Lake Valley examined the previous year by Lt. Col. Charles S. Drew. Pengra and the McCall escort moved east into the forests and emerged atop Winter Rim, as had John Fremont in 1843. Pengra wrote:

we came through a thick grove of black pines, suddenly upon the precipitous edge of the ridge. Here we had presented to view the strongest contrast and wildest scenery, it has ever been my fortune to behold. At our feet, from fifteen hundred to two thousand feet below, and two miles distant, was a broad, beautiful lake.

The party was very favorably impressed by Summer Lake and the watershed of the Chewaukan River. The men moved on to the southeast, skirted Abert Lake and crossed over the ridges north of Abert Rim to drop into the watershed of Honey Creek and the Warner Valley (Pengra 1866c).

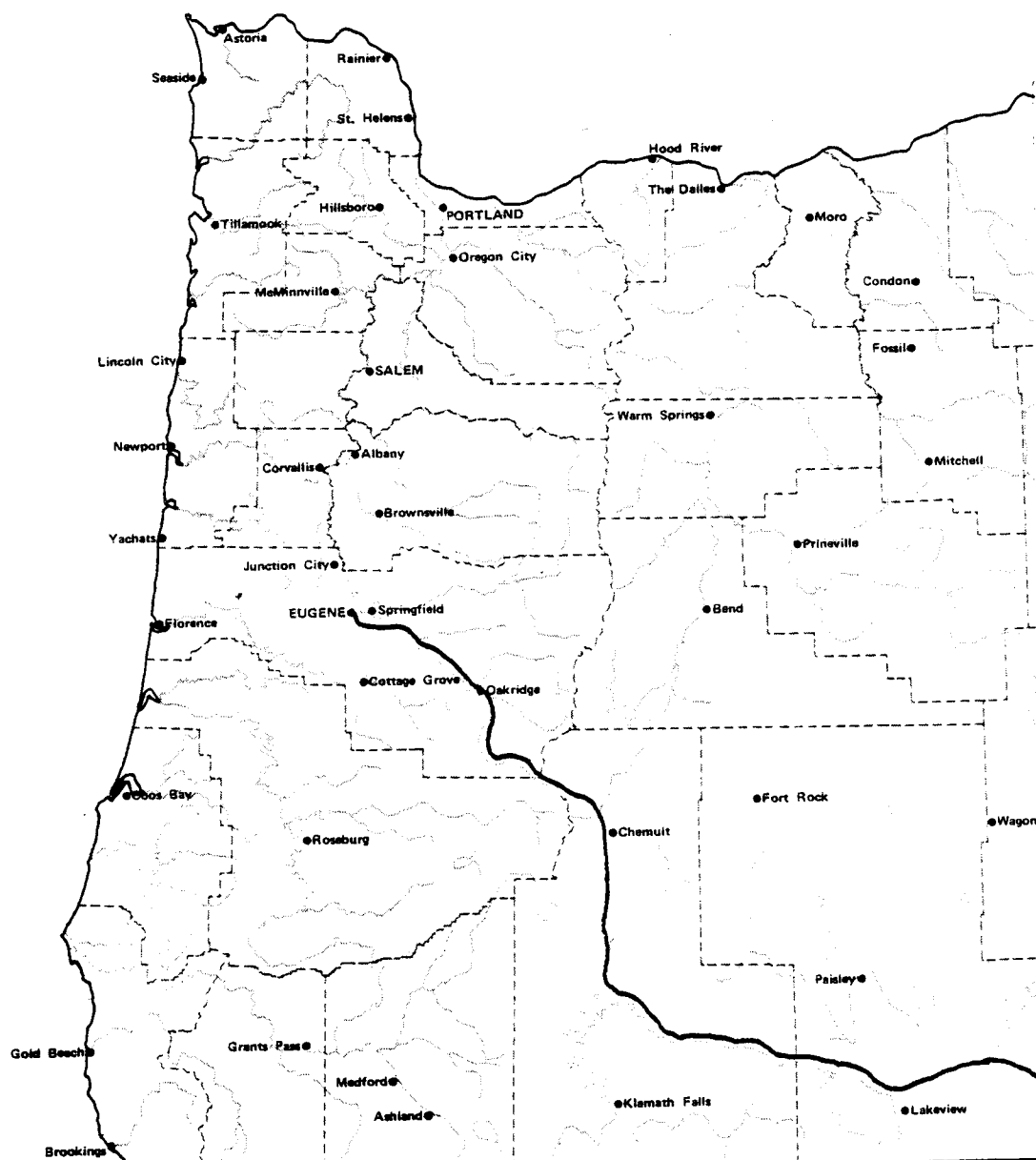
The level of the lakes in the Warner Valley was high in 1866. The road surveyors had to journey almost to the head of the long valley before they could cross to the east side and cross Hart Mountain to the valley of the Donder and Blitzen River at the foot of Steen's Mountain. During this time they hoped to see Odell's party, but days passed and no contact was established. Pengra waited near the western edge of the Alvord Desert, concluding that Drew's explorations from this

point and eastward were probably sufficient to accept as a general road route. At last sighting Odell, who had also been delayed by finding too much high water in the Warner Valley, the explorers turned back to the west on August 29. A conference convinced Pengra that the terrain examined by Odell was more suitable for a road than that which he had covered. The men consequently dropped south to Beatty's Butte and began marking a road route west across the Warner Valley and over the mountains into the Goose Lake Valley. They ascended the next range of mountains to the west through Drew's Valley and took the Sprague River route back to Fort Klamath (Pengra 1866d; 1866e).

The explorations carried out by the surveyors of the Oregon Central Military Wagon Road Company east of the construction parties in 1865 had yielded detailed information about a route especially attractive to the investors. Pengra had found a new pass through the Cascades at Summit Lake which was lower than that on the Free Emigrant Route. He had located thousands of acres of lush meadows along the proposed road route. Rather than heading due east from the Deschutes toward Boise he had, to the benefit of the investors, turned the road almost due south to Klamath Marsh and the luxuriant Sprague River Valley. To the east were the meadows of Drews Valley, Goose Lake Valley, and the Warner Valley. By taking a circuitous route the surveyors had increased the amount of acreage that would be transferred to the company. By wending their way through the best-watered lands of south-central Oregon they had laid out a route which would enable their company to secure some of the most valuable lands in the district.

Very important to the road company as well was the information that the route selected put the investors in a very good position to build a railroad from the upper Willamette Valley to the Union Pacific line to the southeast in Nevada. The impetus for the building of the wagon road by the capitalists from Eugene may have been fostered by the immediate prospect of gaining thousands of acres of land; the long term motive may well have been, however, the construction of a rail line. Pengra broached such a possibility in his summary report to the Board of Directors on November 25, 1865: "A railroad laid over this route, to connect with the line of the Pacific railroad, would traverse the same country with the wagon road until it entered Warner's Basin, when it would bear more to the southward, and connect about five hundred and twenty miles from Portland" (Pengra 1866d). Pengra's faith in the new pass north of Diamond Peak--the Salt Creek pass at Odell Lake--proved to be prophetic. Early in the twentieth century it did become the route for the railroad crossing of the Cascades.

While Pengra and Odell with their military escorts were spying out the route east of the Cascades during the summer of 1865, Simpson and his crews of Indian laborers continued building the road along the north bank of the Middle Fork of the Willamette River. By late June the first ferry boat had been constructed and launched by A. S. Patterson. The vessel was probably for service on the Coast Fork crossing (Anonymous



Oregon Central Military Wagon Road, 1865

(Fig. 1)

1865f). By August 26 the road was almost finished 40 miles east of Eugene to Big Prairie. The route was ardently promoted by the editor of the *Oregon State Journal* who reported: "A number of persons, including some of the citizens of Eugene City, have lately been up to the big prairie on fishing and hunting excursions, rustivating in the mountains and invigorating their systems by breathing in the pure, fresh air. Others would find their health improved by adopting a similar course (Anonymous 1865g).

A unique feature of the building of the Oregon Central Military Wagon Road was the role of Indian labor in the construction. The Indians from the Siletz Reservation felled the trees, cleared the route, cut the grades, and built most of the road from Butte Disappointment to the Big Pine Openings. George W. Larrison of Lane County carried the contract for the first twenty miles from Eugene to the Butte. Benjamin Simpson, the Indian agent at Siletz, secured it for the next 45 miles to the Pine Openings (probably Rigdon Meadows). The public took notice of the accomplishment of the Indian laborers and the *Oregon State Journal* covered it in an editorial "Will Indians Work?"

It is frequently asserted that Indians will not work--that they will 'starve rather than work,' etc. Without entering a very exalted opinion of 'lo, the poor Indian!' we can contradict this. Last summer Ben Simpson employed on the Oregon Central Military Wagon Road one hundred Indians from the Siletz Agency. The work was the hardest kind--cutting and sawing large trees and grading around rocky bluffs. They worked like beavers, for several months, during the hottest season of the year, receiving \$1 per day and board for their labor. This summer several of the same Indians are working for farmers in this county . . . Whatever can be said of other Indians, these Indians are fond of money and are willing to work for it (Anonymous 1866b).

Simpson's laborers completed 38 miles of the route in 1865. He was released from any continuation of his contract the following spring when he pleaded that he had suffered "financial embarrassment" from the costs encountered (U. S. Senate 1887: 74).

In 1866 the road company sent out its first workers in March. The foreman of the crews was William B. Pengra, brother of the superintendent. A total of 15 new miles, some of it on the steep ascent of the Cascades to Beaver Marsh, was constructed that year. The clearing and improving of the road was essential, for the Board of Directors had invited Governor Addison C. Gibbs to "view" the route and decide whether or not he would certify the first land grant to the company. The acquisition of land was of prime importance, for the company needed the acreage in order to raise more money to build additional miles of road (Anonymous 1866a). In the first week of July Governor Gibbs and

his ten-year-old son arrived in Eugene to visit the road and make a determination about the acceptance of the first 50 miles built in 1865 (Anonymous 1866c).

In addition to the governor and his son, the road viewers included several of the principals in the company: B. J. Pengra, J. B. Underwood, T. D. Edwards, Lorin L. Williams, Dr. A. Renfew, and H. F. Stratton. The men journeyed four miles south of Eugene on the Territorial Road to the mouth of the Coast Fork of the Willamette. They turned up that stream to cross to Pleasant Hill at Dudley's Ferry. At a point approximately half way between Butte Disappointment and the foothills of the Cascades they crossed on another ferry to the north bank of the Middle Fork of the Willamette and soon entered the heavily timbered area. The party moved along steadily, having to remove a few trees which had fallen across the road but, on the second day, arriving at Big Prairie. They found 45 miles of good road between Eugene and that point. The third day the party spent fishing in the river, but on the fourth day the governor set out for Little Prairie and to the South Fork to a point 52 miles east of Eugene (Anonymous 1866c).

In the late summer of 1866 the company attempted to push the road on to the Pine Openings and from there to the Deschutes. On August 11 B. J. Pengra advertised for 25 men to work on the route. "Hands will be paid at the end of each month, in gold coin, liberal wages offered," he added (Anonymous 1866d). In spite of these inducements and hopes, the road did not reach the summit until September, 1867. William Pengra continued as foreman; Mahlon Harlow was in charge of bridge building. The crews completed the road as far as Crescent Lake, 85 miles southeast of Eugene. That fall Senator Henry Corbett traveled the road to beyond the pass and reported that it was a good route with likely potential for railroad construction (Anonymous 1867a; U. S. Senate 1887: 74). The company suspended its work in October when within a few miles of the Deschutes River (Anonymous 1867b).

The death of Judge R. F. Stratton in 1868 led to the selection of B. J. Pengra as president of the road company. Pengra hired William H. Odell to become superintendent. The two foremen were George H. Larrison and a man named Walton. A total of 40 laborers went into the field and extended the road from Crescent Lake to Klamath Marsh and east to Round Grove on the head of the Sprague River, a distance of 145 miles. In 1869 Odell was ordered to complete the survey of the route from Beatys Butte to Boise and to build the road from Round Grove to the Idaho border (U. S. Senate 1887: 74).

In the late 1860's all appeared to proceed according to plan on the Oregon Central Military Wagon Road. Congress had intended to open a new route from the upper Willamette Valley to the region east of the Cascades. By 1868 that task was nearly accomplished. The road company investors hoped to gain vast tracts of public domain from which they could subsidize their company and eventually realize a substantial profit. A major obstacle, however, appeared to stand in the way of

part of this program. Along the first twenty miles of the road to the south and east of Eugene almost all of the land within the three mile grant corridor had been filed upon and was thus unavailable to the company. On December 26, 1866, however, Congress remedied this problem by passing an act (14 Stat. 374) which authorized the State of Oregon to select lieu lands from odd-numbered sections within a six mile area on either side of the road. The measure opened up the transfer of lands to the company along the first twenty miles that were particularly attractive because of their fine stands of timber or open meadows (U. S. Senate 1887: 2).

Governor Gibbs, in spite of falling fully clothed into the Middle Fork of the Willamette, appeared to enjoy fishing in the Cascades. On July 27, 1866, he approved and certified the road he had examined. On November 13, 1867, the State of Oregon transferred 19,153.73 acres of public lands to the wagon road company. The investors had obtained 1,260 acres of land for each mile of road built. Congress provided further assistance on March 3, 1869, in another act (15 Stat. 340). Congress extended the time for the completion of the road to July 2, 1872. A further act (18 Stat. 80) of Congress on June 18, 1874, provided for the issuance of patents to the State of Oregon for all lands granted for the aid of the construction of wagon roads as fast as such roads were completed and the lands selected (U. S. Senate 1887: 2, 19).

The Oregon Central Military Wagon Road Company gained certification to the State of Oregon of large parcels of land in 1871 and 1873. On April 21, 1867, within the three mile limit the State received 167,633.57 acres; on December 8 of the same year the State gained 113,504.91 acres. Within the six mile limit area the State on April 13, 1871, gained 23,475.66 acres and on December 8 of that year received another 9,641.14 acres. On April 2, 1873, the State acquired 23,458.48 acres from the three mile area and 4,459.94 acres from the six mile tract. Altogether by 1875 the investors had obtained certification to 361,327.43 acres out of the potential grants of 806,400 acres from Congress to the State of Oregon (U. S. Senate 1887: 2).

B. J. Pengra, the primary figure in the survey and construction of the road, testified in 1886 that during the years of work a total of 95 bridges were built by his company. Among the major bridges were the following: one at the Coast Fork of the Willamette which replaced the ferry; one built on the North Fork at a cost of \$1,000; and one, combined with a causeway, that extended for 5,170 feet across Klamath Marsh. "The width at which the road was cleared in the Cascade range of mountains," Pengra recalled, "was 30 feet, in compliance with the statute laws of the State of Oregon, and the grades were made 16 feet in width, except along the mountain sides, where, under the law, we were permitted to lessen them to a breadth of 12 feet where the cutting was at a greater depth than 4 feet, but turnouts were made every 200 feet . . ." (U. S. Senate 1887: 74-75).

In actual outlays of capital the Oregon Central Military Wagon Road Company paid \$100,000 through the sale of capital stock, \$12,705 by the sale of lands, and \$15,833.82 received in loan from the Ladd & Tilton Bank. When the company disposed of its remaining lands to the Oregon-California Land Company, it received \$125,000, almost enough to cover its remaining expenses incurred in the construction (U. S. Senate 1887: 25, 75).



Fig. 2. Rigdon Meadows, T24S, R4E, Sec. 16. At this site Stephen and Zilphia Rigdon grazed their livestock, sold meals to travelers, and from 1871-96 logged data on users of the wagon road.



Fig. 3. A very well preserved section of the old grade of the OCMW Road ascends the western slope of the Cascades west of Beaver Marsh, T24S, R5E, Sec. 22.

Use of the Oregon Central Military Wagon Road

The route of the Oregon Central Military Wagon Road west of the Cascades had initial use as the Free Emigrant Route. From 1853 onward parties used the passes south of Diamond Peak to traverse the mountains to reach destinations in the upper Willamette Valley or in central and eastern Oregon. By the early 1860's packers with goods and drovers with livestock increased their use of this route in order to service the markets of the mining communities in Grant County and distant Baker County. Before the route was cleared, graded, and supplied with adequate bridges probably as many as 2,000 or more travelers had passed over it in the historic period.

A remarkable picture of road use of this important artery of travel and commerce was quietly recorded in the nineteenth century by Lane County pioneer Stephen Rigdon. Born in the Middle West, Rigdon emigrated by ox team to California in 1850. In 1852 his father, John Rigdon, moved overland from Iowa to the Willamette Valley. Stephen Rigdon then journeyed north to Oregon to reside near his father and stepmother. In the spring of 1854 the Rigdons settled near Pleasant Hill and that year Stephen married Zilphia Bristow, the daughter of Elijah Bristow. Zilphia's parents had emigrated over the Oregon Trail in the 1840's; her father was the first white man to settle in Lane County (Anonymous 1903: 1073-1074).

Stephen Rigdon worked part of his father-in-law's Donation Land Claim and by 1903 had 275 acres near Pleasant Hill in his farm. Commencing in 1871 Rigdon and his wife left their farm, usually in May to take their herds of livestock far up the Middle Fork of the Willamette River to the site presently known as Rigdon Meadows. There they grazed their sheep and cattle and operated a station which offered meals, blacksmith repairs, and small items for sale to travelers on the Oregon Central Military Wagon Road. Between 1871 and 1896 Stephen Rigdon kept notebooks in which he recorded information about those who traveled the Oregon Central Military Wagon Road. His records are preserved in the library of the Oregon Historical Society in Portland, Oregon (Anonymous 1903: 1074).

The following information is based upon an analysis of eleven years of Rigdon's records. The sample is over 50% of the extant records from the period 1871-96. Rigdon's surviving notebooks are from the years 1871-85 and 1891-96. The material includes several categories of information: the numbers of parties, men, women, children, wagons, cattle, horses, and sheep; the direction of travel; and, in many instances, the primary destination. All of this data has been examined and analyzed for the purposes of this study. Additionally, Rigdon recorded many miscellaneous notes about those who passed his station on the road. For example, on August 14, 1877, he wrote:

[three men] left here at half past two o'clock this morning without paying their bill which was three dollars. One of them is one of the two who went

down 22 of July and giving his name as Franklin then on Aug. 1st two men west after them one of their names Fisher, said they had stole the horse that both were named Meulley and brothers. So they must all be thieves together (Rigdon 1871-96).

Among Rigdon's notes are several small items of interest. In September, 1873, he recorded that one Black man was headed west. In October, 1875, he noted "Frank Bryant and Dan Cook, the fools" were headed east. In July, 1896, the first two bicycles to pass over the road both headed east; one rider was going to Klamath Falls and the other was bound for Baker City. Rigdon's notes also indicate that he personally worked many days each year on improving the route. Since no toll was paid for travel on this thoroughfare, his motivation must have been to keep the traffic flowing past his summer station so that he could earn a small income. Rigdon had been among the early investors, as well, in the Oregon Central Military Wagon Road (Rigdon 1871-96).

Stephen and Zilphia Rigdon had no children. Many of their years in the mountains were probably lonely ones. Perhaps it was to fill his days and trigger his memory of those who had passed his doorstep that led this man to develop so unique a compilation of travel records. The Rigdons adopted a nephew, Paul L. Bristow, who in 1903 was operating the farm at Pleasant Hill, Oregon (Anonymous 1903: 1074).

Data Analysis

The materials in the Rigdon notebooks were first entered on Fortran Code Sheets. They were then analyzed on the VAX computer at Lewis and Clark College using a program from the Statistical Program for the Social Sciences (SPSS). The following definitions are applicable for the data analysis:

Mode: the observation that occurs with the greatest frequency

Mean: the total of values of a set of observations divided by their number

Standard Deviation: the measure of variance from the mean which, when stated in percentage, is 68% of all instances in one standard deviation

Absolute Frequency: the exact number of times that a value occurs

Relative Frequency: the percentage of times that a value occurs

Missing Values: the instances when the observation was not recorded or reasonable doubt exists about the accuracy of the recorded information

(Hamburg 1974)

Party Size

The Oregon Central Military Wagon Road ran through a wilderness. Travelers often took seven to ten days to make the journey from Eugene and Springfield over the Cascades to the Deschutes River in Central Oregon. Some parties were large, perhaps for protection or companionship. Others may have been made of good numbers of people because of the necessity of managing livestock along the trail. Some parties were small because they were made up of two or three men hurrying over the road to seek employment.

TABLE 1
MEAN AND MODE OF PARTY SIZE

Year	Mean	Mode	Standard Deviation
1871	6.2	2.0	5.1
1873	4.0	2.0	3.2
1875	4.0	2.0	3.6
1877	3.6	2.0	3.3
1879	3.5	1.0	2.6
1881	3.4	2.0	2.8
1883	4.1	2.0	3.6
1885	3.5	2.0	3.0
1892	3.0	2.0	3.8
1894	3.2	2.0	2.6
1896	3.4	2.0	3.3

Table 1 shows that the average party size during the eleven sample years varied between four and seven persons; four was the average in nine of the 11 years. The Mode in all years except 1879, however, was two. The Adjusted Frequency of party size (see Table 3) indicates that in eight of the eleven sample years party size was four or less in more than 70% of all cases. The exceptions were in 49% in 1871, 67% in 1873, and 69% in 1875.

On only 14 occasions out of a total of 2,824 observations did parties of 20 or more cross the road during the sample years. The largest parties were one of 30 in 1871, one of 34 in 1896, and one of 63 in 1892. Rigdon identified this largest contingent as military forces from the Klamath Basin.

The common traveling party on the road contained two persons.

TABLE 2
ABSOLUTE FREQUENCY OF PARTY SIZE

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
No. in Party											
1	25	51	80	64	54	38	39	58	104	66	56
2	35	57	86	65	53	46	44	64	109	84	93
3	27	35	50	49	25	22	27	39	65	49	27
4	15	22	35	20	25	17	26	25	31	36	31
5	10	25	34	19	11	14	8	27	20	15	19
6	13	9	15	10	14	8	12	9	13	6	10
7	21	17	16	9	17	4	10	4	7	11	6
8	17	8	6	8	10	7	11	8	6	9	2
9	7	6	10	4	3	1	3	4	4	2	5
10	5	6	10	2	2	2	4	4	5	1	5
11	5	2	5	1	3	1	2	0	4	2	5
12	4	3	3	3	0	0	3	1	0	1	1
13	8	3	6	1	1	0	1	1	0	0	0
14	4	1	1	2	0	0	0	0	0	0	0
15	4	0	1	0	0	0	2	0	0	0	0
16	1	2	3	1	0	0	0	1	0	1	0
17	2	1	2	1	0	0	1	0	0	1	2
18	2	0	0	0	0	1	0	2	0	0	0
19	1	0	0	0	0	0	0	0	0	0	0
20	1	0	0	0	0	1	0	1	0	0	0

TABLE 2 (Cont.)

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
No. in Party											
21	0	0	1	0	0	0	0	0	0	1	0
22	1	0	0	0	0	0	0	0	0	0	0
23	1	0	0	1	0	0	0	0	0	0	0
24	0	0	0	1	0	0	0	0	0	0	0
27	1	0	0	0	0	0	0	0	0	0	0
28	0	0	1	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	1	0	0	0	0
30	1	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	1
63	0	0	0	0	0	0	0	0	1	0	0
0*	1	7	0	0	0	0	0	0	0	0	0
Total	212	255	365	261	218	162	194	248	369	285	263

*On a few occasions Rigdon noted the passage of a party but failed to identify the number of people in the group. These instances have been entered as missing values in this table. They have not been included in the percentages in the Table of Adjusted Frequency (see Table

TABLE 3
ADJUSTED FREQUENCY (%) OF PARTY SIZE

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
No. in Party											
1	11.8	20.6	21.9	24.5	24.8	23.5	20.1	23.4	28.2	23.2	21.3
2	16.6	23.0	23.6	24.9	24.3	28.4	22.7	25.8	29.5	29.5	35.4
3	12.8	14.1	13.7	18.8	11.5	13.6	13.9	15.7	17.6	17.2	10.3
4	7.1	8.9	9.6	7.7	11.5	10.5	13.4	10.1	8.4	12.6	11.8
5	4.7	10.1	9.3	7.3	5.0	8.6	4.1	10.9	5.4	5.3	7.2
6	6.2	3.6	4.1	3.8	6.4	4.9	6.2	3.6	3.5	2.1	3.8
7	10.0	6.9	4.4	3.4	7.8	2.5	5.2	1.6	1.9	3.9	2.3
8	8.1	3.2	1.6	3.1	4.6	4.3	5.7	3.2	1.6	3.2	0.8
9	3.3	2.4	2.7	1.5	1.4	0.6	1.5	1.6	1.1	0.7	1.9
10	2.4	2.4	2.7	0.8	0.9	1.2	2.1	1.6	1.4	0.4	1.9
11	2.4	0.8	1.4	0.4	1.4	0.6	1.0	0.0	1.1	0.7	1.9
12	1.9	1.2	0.8	1.1	0.0	0.0	1.5	0.4	0.0	0.0	0.4
13	3.8	1.2	1.6	0.4	0.5	0.0	0.5	0.4	0.0	0.4	0.0
14	1.9	0.4	0.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	1.9	0.0	0.3	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
16	0.5	0.8	0.8	0.4	0.0	0.0	0.0	0.4	0.0	0.4	0.0
17	0.9	0.4	0.5	0.4	0.0	0.0	0.5	0.0	0.0	0.4	0.8
18	0.9	0.0	0.0	0.0	0.0	0.6	0.0	0.8	0.0	0.0	0.0
19	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.5	0.0	0.0	0.0	0.0	0.6	0.0	0.4	0.0	0.0	0.0

TABLE 3 (Cont.)

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
No. in Party											
21	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
22	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	0.5	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
30	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
63	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Road Use by Month

In the eleven years selected for study a total of 2,824 parties containing 10,476 persons traveled over the Oregon Central Military Wagon Road. Stephen Rigdon's records most commonly began in May and continued through October. In 1877, 1881, and 1885, however, he arrived at the Rigdon Meadows in April. In seven of the sample years he remained until early November. The statistics thus for road use by the month are of optimal accuracy or detail for the period from June 1 through October 31. The information for April, November, and probably for part of May is not complete.

TABLE 4
MEAN AND MODE OF ROAD USE BY MONTH

Year	Mean	Mode	Standard Deviation
1871	7.5	6.0	1.6
1873	8.2	10.0	1.7
1875	7.7	6.0	1.6
1877	7.5	6.0	1.7
1879	8.2	9.0	1.5
1881	7.7	6.0	1.6
1883	7.6	6.0	1.4
1885	7.9	9.0	1.6
1892	7.9	9.0	1.6
1894	8.2	9.0	1.3
1896	7.9	9.0	1.3

The determination of the Mode clearly indicates that the major months of road use were June and September. In five years June was the most frequently used month; in five years September held the same identification. The calculation of the Mean, however, fixes July or mid-summer as the time of greatest average road use (see Table 4).

The relative frequency of road use by month (see Table 6) indicates steady road use from June through October. In many years between 13% and 25% of the travelers came over the road in each of those months. Use in May was consistently light and only in 1873 and 1877 did it exceed 10%. The years 1875 and 1892 were major ones of travel when 365 and 369 parties passed over the road. The peak month of travel by groups during the years sampled was June, 1875, when 93 parties used the road (see Table 5).

TABLE 5
ABSOLUTE FREQUENCY OF ROAD USE
BY PARTIES BY MONTH

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
Month											
Apr.	0	0	0	2	0	1	0	1	0	0	0
May	4	26	14	35	4	6	6	21	20	2	4
June	76	16	93	54	33	39	50	41	64	39	36
July	46	48	80	36	33	30	47	34	73	50	58
Aug.	16	41	50	41	43	28	27	44	68	63	61
Sept.	31	46	48	47	54	28	41	62	79	79	67
Oct.	35	70	75	40	42	30	23	41	56	52	37
Nov.	4	8	5	6	9	0	0	4	9	0	0
Total	212	255	365	261	218	162	194	248	369	285	263

TABLE 6
RELATIVE FREQUENCY OF ROAD USE
BY PARTIES BY MONTH

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
Month											
Apr.	0.0	0.0	0.0	0.8	0.0	0.6	0.0	0.4	0.0	0.0	0.0
May	1.9	10.2	3.8	13.4	1.8	3.7	3.1	8.5	5.4	0.7	1.5
June	35.8	6.3	25.5	20.7	15.1	24.1	25.8	16.5	17.3	13.7	13.7
July	21.7	18.8	21.9	13.8	15.1	18.5	24.2	13.7	19.8	17.5	22.1
Aug.	7.5	16.1	13.7	15.7	19.7	17.3	13.9	17.7	18.4	22.1	23.2
Sept.	14.6	18.0	13.2	18.0	24.8	17.3	21.1	25.0	21.4	27.7	25.5
Oct.	16.5	27.5	20.5	15.3	19.3	18.5	11.9	16.5	15.2	18.2	14.1
Nov.	1.9	3.1	1.4	2.3	4.1	0.0	0.0	1.6	2.4	0.0	0.0

Road Use by Direction by Month

Table 9 contains the analysis of the movement of travelers over the Oregon Central Military Wagon road by direction by month. In seven of the 11 years a greater number of travelers moved east over the road than west (see Table 7). Road use by eastward bound travelers was especially strong in 1871, 1873, and 1875. This travel coincides with the migration of families from western Oregon into the valleys of Goose Lake, Summer Lake, Silver Lake, the Warner Valley, and the Klamath Basin. By the late 1870's road use appears to have tapered off and fallen into a fairly fixed pattern with between 800 and 1,000 persons going over it during the prime traveling season each year.

TABLE 7
TOTAL OF TRAVELERS BY DIRECTION

Year	East	West
1871	988	322
1873	571	423
1875	762	719
1877	376	551
1879	341	425
1881	299	245
1883	426	370
1885	446	411
1892	490	619
1894	444	458
1896	496	394

Table 10 contains the analysis of the movement of cattle over the Oregon Central Military Wagon Road by direction by month. The route was clearly a major artery of the eastward movement of cattle herds into the grazing lands of central and southeastern Oregon in the late nineteenth century. Of a total of 21,182 cattle to pass over the route during the sample years, 19,700 or 93% were eastward bound. Only 1,482 or 7% were headed west over the road. The prime years for the cattle drives were the 1870's when, during the five sample years in that decade, a total of 12,821 cattle moved east over the road.

The movement of cattle suggests either that the herds on the Oregon Central Military Wagon Road were being driven east to help build up the livestock industry in central or southeastern Oregon or

that they were destined for distant markets through such railheads as that at Winemucca, Nevada. Since the bulk of the cattle movement occurred in the 1870's at a time coincident with the rapid influx of cattle and sheep raisers into that part of Oregon east of the Cascades, it is likely that the building up of herds in that part of the state was a prime factor. Clearly, however, the Oregon Central Military Wagon Road was a very important route for livestock movement in nineteenth century Oregon.

TABLE 8
TOTAL OF CATTLE BY DIRECTION

Year	East	West
1871	4417	566
1873	1443	41
1875	2599	25
1877	2657	7
1879	1719	55
1881	1641	0
1883	2276	1
1885	1005	309
1892	1239	341
1894	310	106
1896	394	31

Table 11 contains the analysis of the movement of sheep by direction by month over the Oregon Central Military Wagon Road. In the eleven sample years a total of 33,874 sheep used this route. Of this number 23,013 or 67.9% were east bound, while 10,861 or 32.1% were west bound. The largest month of sheep use of the road occurred in July, 1873, when flocks of 5,738 sheep used the road on a westbound journey. Of all months during which sheep used the road during the sample years, June and July were the most frequently used (see Table 11).

TABLE 9
MOVEMENT OF TRAVELERS BY DIRECTION BY MONTH

1871

Probably East*	Frequency	West	Frequency
Apr.	0	Apr.	0
May	8	May	27
June	433	June	52
July	247	July	85
Aug.	15	Aug.	65
Sept.	66	Sept.	66
Oct.	136	Oct.	21
Nov.	0	Nov.	6
Total	905	Total	322

East	Frequency
Apr.	0
May	20
June	0
July	2
Aug.	7
Sept.	0
Oct.	35
Nov.	19
Total	83

*Only in 1871 are Rigdon's records uncertain about direction of travel. Evidence suggests that persons enumerated here were probably headed east.

Total Cases in 1871: 212
Missing Cases: 1 (.5%)

1873

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	93	May	10
June	7	June	61
July	122	July	80
Aug.	44	Aug.	102
Sept.	70	Sept.	105
Oct.	229	Oct.	57
Nov.	6	Nov.	8
Total	571	Total	423

Total Cases in 1873: 255
Missing Cases: 7 (2.7%)

TABLE 9 (Cont.)

1875

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	24	May	16
June	175	June	199
July	174	July	133
Aug.	88	Aug.	122
Sept.	113	Sept.	122
Oct.	180	Oct.	112
Nov.	8	Nov.	15
Total	762	Total	719

Total Cases in 1875: 365

1877

East	Frequency	West	Frequency
Apr.	0	Apr.	13
May	63	May	68
June	94	June	108
July	67	July	74
Aug.	30	Aug.	105
Sept.	67	Sept.	100
Oct.	53	Oct.	73
Nov.	2	Nov.	10
	376		551

Total Cases in 1877: 261

TABLE 9 (Cont.)

1879

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	9	May	4
June	66	June	62
July	39	July	82
Aug.	58	Aug.	94
Sept.	90	Sept.	105
Oct.	68	Oct.	60
Nov.	11	Nov.	18
Total	341		425

Total Cases in 1879: 218

1881

East	Frequency	West	Frequency
Apr.	2	Apr.	0
May	25	May	7
June	76	June	64
July	77	July	30
Aug.	32	Aug.	59
Sept.	37	Sept.	46
Oct.	50	Oct	39
Nov.	0	Nov.	0
	299		245

Total Cases in 1881: 162

TABLE 9 (Cont.)

1883

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	9	May	10
June	159	June	77
July	81	July	117
Aug.	30	Aug.	64
Sept.	88	Sept.	78
Oct.	59	Oct.	24
Nov.	0	Nov.	0
Total	426	Total	370

Total Cases in 1883: 194

1885

East	Frequency	West	Frequency
Apr.	0	Apr.	2
May	54	May	16
June	83	June	81
July	42	July	48
Aug.	81	Aug.	57
Sept.	93	Sept.	156
Oct.	93	Oct.	43
Nov.	0	Nov.	8
Total	446	Total	411

Total Cases in 1885: 248

TABLE 9 (Cont.)

1892

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	35	May	19
June	112	June	91
July	86	July	146
Aug.	79	Aug.	134
Sept.	87	Sept.	128
Oct.	80	Oct.	85
Nov.	11	Nov.	16
Total	490	Total	619

Total Cases in 1892: 369

1894

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	7	May	0
June	60	June	62
July	89	July	53
Aug.	115	Aug.	120
Sept.	98	Sept.	142
Oct.	75	Oct.	81
Nov.	0	Nov.	0
Total	444	Total	458

Total Cases in 1894: 285

TABLE 9 (Cont.)

1896

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	14
June	62	June	47
July	149	July	59
Aug.	123	Aug.	111
Sept.	99	Sept.	129
Oct.	63	Oct.	34
Nov.	0	Nov.	0
Total	496	Total	394

Total Cases in 1896: 263

TABLE 10
MOVEMENT OF CATTLE BY DIRECTION BY MONTH

1871

Probably East*	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	257
June	3412	June	82
July	787	July	10
Aug.	0	Aug.	34
Sept.	94	Sept.	78
Oct.	110	Oct.	105
Nov.	0	Nov.	0
Total	4403	Total	566

East	Frequency
Oct.	14
Total	14

*Only in 1871 are Rigdon's records uncertain about direction of travel. Evidence suggests that cattle enumerated here were probably headed east.

Total Cases in 1871: 212
Missing Cases: 151 (71.2%)

1873

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	500	May	0
June	131	June	0
July	381	July	0
Aug.	0	Aug.	0
Sept.	94	Sept.	0
Oct.	337	Oct.	0
Nov.	0	Nov.	41
Total	1443	Total	41

Total Cases in 1873: 255
Missing Cases: 220 (86.3%)

TABLE 10

1875

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	1104	June	19
July	1219	July	0
Aug.	138	Aug.	0
Sept.	137	Sept.	0
Oct.	1	Oct.	6
Nov.	0	Nov.	0
Total	2599	Total	25

Total Cases in 1875: 365

Missing Cases: 335 (91.8%)

1877

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	1248	May	0
June	877	June	0
July	200	July	2
Aug.	0	Aug.	0
Sept.	196	Sept.	5
Oct.	136	Oct.	0
Nov.	0	Nov.	0
Total	2657	Total	7

Total Cases in 1877: 261

Missing Cases: 241 (92.3%)

TABLE 10

1879

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	370	May	0
June	1327	June	0
July	0	July	0
Aug.	2	Aug.	0
Sept.	0	Sept.	0
Oct.	20	Oct.	0
Nov.	0	Nov.	55
Total	1719	Total	55

Total Cases in 1879: 218
 Missing Cases: 203 (93.1%)

1881

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	1460	June	0
July	173	July	0
Aug.	0	Aug.	0
Sept.	8	Sept.	0
Oct.	0	Oct.	0
Nov.	0	Nov.	0
Total	1641	Total	0

Total Cases in 1881: 162
 Missing Cases: 154 (95.1%)

TABLE 10

1883

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	1891	June	0
July	351	July	0
Aug.	0	Aug.	1
Sept.	12	Sept.	0
Oct.	22	Oct.	0
Nov.	0	Nov.	0
Total	2276	Total	1

Total Cases in 1883: 194
 Missing Cases: 176 (90.7%)

1885

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	928	May	0
June	59	June	0
July	0	July	0
Aug.	1	Aug.	0
Sept.	13	Sept.	309
Oct.	4	Oct.	0
Nov.	0	Nov.	0
Total	1005	Total	309

Total Cases in 1885: 248
 Missing Cases: 235 (94.8%)

TABLE 10

1892

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	245	May	0
June	993	June	2
July	1	July	0
Aug.	0	Aug.	0
Sept.	0	Sept.	0
Oct.	0	Oct.	331
Nov.	0	Nov.	8
Total	1239	Total	341

Total Cases in 1892: 369

Missing Cases: 351 (95.1%)

1894

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	13	May	0
June	169	June	2
July	123	July	0
Aug.	0	Aug.	4
Sept.	5	Sept.	0
Oct.	0	Oct.	100
Nov.	0	Nov.	0
Total	310	Total	106

Total Cases in 1894: 285

Missing Cases: 275 (96.5%)

TABLE 10

1896

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	8	June	0
July	279	July	2
Aug.	2	Aug.	0
Sept.	87	Sept.	29
Oct.	18	Oct.	0
Nov.	0	Nov.	0
Total	394	Total	31

Total Cases in 1896: 263

Missing Cases: 254 (96.6%)

TABLE 11
MOVEMENT OF SHEEP BY DIRECTION BY MONTH

1871

Probably East*	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	3300	June	0
July	3950	July	1100
Aug.	0	Aug.	1
Sept.	0	Sept.	0
Oct.	130	Oct.	1200
Nov.	0	Nov.	0
Total	7380	Total	2301

Total Cases: 212

Missing Cases: 203 (95.8%)

*Only in 1871 are Rigdon's records uncertain about the direction of travel. Evidence suggests that sheep enumerated here were probably headed east.

1873

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	0	June	651
July	0	July	5738
Aug.	528	Aug.	400
Sept.	200	Sept.	0
Oct.	827	Oct.	900
Nov.	0	Nov.	0
Total	1555	Total	7689

Total Cases: 255

Missing Cases: 240 (94.1%)

TABLE 11

1875

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	400	June	11
July	1630	July	0
Aug.	3360	Aug.	0
Sept.	0	Sept.	0
Oct.	20	Oct.	0
Nov.	16	Nov.	0
Total	5426	Total	11

Total Cases: 365

Missing Cases: 355 (97.3%)

1877

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	0	June	0
July	0	July	0
Aug.	0	Aug.	0
Sept.	0	Sept.	0
Oct.	0	Oct.	0
Nov.	0	Nov.	0
Total	0	Total	0

Total Cases: 261

Missing Cases: 261 (100%)

TABLE 11

1879

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	0	June	0
July	2940	July	0
Aug.	1400	Aug.	0
Sept.	0	Sept.	0
Oct.	6	Oct.	0
Nov.	0	Nov.	0
Total	4346	Total	0

Total Cases: 218

Missing Cases: 213 (97.7%)

1881

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	0	June	0
July	0	July	0
Aug.	0	Aug.	0
Sept.	0	Sept.	0
Oct.	0	Oct.	0
Nov.	0	Nov.	0
Total	0	Total	0

Total Cases: 162

Missing Cases: 162 (100%)

TABLE 11

1883

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	1600	June	0
July	1700	July	0
Aug.	0	Aug.	0
Sept.	0	Sept.	0
Oct.	0	Oct.	0
Nov.	0	Nov.	0
Total	3300	Total	0

Total Cases: 194

Missing Cases: 192 (99%)

1885

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	0	June	0
July	0	July	0
Aug.	0	Aug.	0
Sept.	0	Sept.	0
Oct.	0	Oct.	0
Nov.	0	Nov.	0
Total	0	Total	0

Total Cases: 248

Missing Cases: 248 (100%)

TABLE 11

1892

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	0	June	0
July	0	July	0
Aug.	0	Aug.	0
Sept.	0	Sept.	0
Oct.	0	Oct.	0
Nov.	0	Nov.	0
Total	0	Total	0

Total Cases: 369

Missing Cases: 369 (100%)

1894

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	0	June	0
July	1006	July	0
Aug.	0	Aug.	0
Sept.	0	Sept.	860
Oct.	0	Oct.	0
Nov.	0	Nov.	0
Total	1006	Total	860

Total Cases: 285

Missing Cases: 283 (99.3%)

TABLE 11

1896

East	Frequency	West	Frequency
Apr.	0	Apr.	0
May	0	May	0
June	0	June	0
July	0	July	0
Aug.	0	Aug.	0
Sept.	0	Sept.	0
Oct.	0	Oct.	0
Nov.	0	Nov.	0
Total	0	Total	0

Total Cases: 263

Missing Cases: 263 (100%)

Travel East and West

The recording of the primary direction of travel parties is an extremely interesting feature of Stephen Rigdon's notes relating to the Oregon Central Military Wagon Road. Settlement in Oregon in the nineteenth century concentrated in the valleys west of the Cascades in the years 1843-1869. By the early 1870's, however, increasing numbers of settlers were finding land prices too high or land unavailable in western Oregon. Further, many had discovered that in the midst of the desert in the Basin region were lush oases where cattle and sheep could graze and where human settlement was attractive. Many moved into the valleys of Summer Lake, Silver Lake, Goose Lake, the Klamth Basin, or the Warner Valley.

In the eleven sample years the majority of parties were headed west over the road. Only in 1871, 1873, and 1896 were more travelers bound eastward. The figures for 1871, which are admittedly imprecise, indicate that approximately 67% of the road users that year were going east. In 1873 the figure was 55.3%. These statistics are in accord with the population trends reflected in the Tenth Decennial Census (1880) for central Oregon. The region experienced a rapid growth during the decade of the 1870's. The preponderance of westward bound travel in the years after 1873 is more difficult to explain. Undoubtedly some of these travelers were finding other routes to return to the area east of the Cascades.

TABLE 12

MEAN AND MODE OF TRAVEL EAST AND WEST

Year	Mean	Mode	Standard Deviation
1871	0.7	0.0	0.0
1873	1.4	1.0	0.5
1875	1.5	2.0	0.5
1877	1.6	2.0	0.5
1879	1.6	2.0	0.5
1881	1.5	2.0	0.5
1883	1.5	2.0	0.5
1885	1.5	2.0	0.5
1892	1.5	2.0	0.5
1894	1.5	2.0	0.5
1896	1.5	1.0	0.5

The calculation of the Mode confirms the preponderance of western bound travel on the road during the sample years (see Table 13).

TABLE 13
ABSOLUTE FREQUENCY OF TRAVEL EAST AND WEST

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
East	13	137	179	104	93	80	92	117	169	133	135
West	69	111	186	157	125	82	102	131	200	152	128
Pro- bably East*	130	0	0	0	0	0	0	0	0	0	0
Total	212	255	365	261	218	162	194	248	369	285	263

*In 1871 Rigdon was imprecise in the identification of the direction of travel. It is believed, however, that in addition to the 13 parties definitely noted as heading east another 130 parties were also moving in that direction.

TABLE 14
RELATIVE FREQUENCY (%) OF TRAVEL EAST AND WEST

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
East	6.1	55.3	49.0	39.8	42.7	49.4	47.4	47.2	45.8	46.7	51.3
West	32.5	44.7	51.0	60.2	57.3	50.6	52.6	52.8	54.2	53.3	48.7
Pro- bably East*	61.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

*In 1871 Rigdon was imprecise in the identification of the direction of travel. It is believed, however, that in addition to the 13 parties definitely noted as heading east another 130 parties were also moving in that direction.

Traveler Destinations

During the years that he resided at Rigdon Meadows, Stephen Rigdon frequently recorded information on the destinations of travelers who passed his station. Some were probably reticent and would not tell him where they were going. Others, apparently not concerned with the curious resident on the upper Middle Fork of the Willamette, freely told him their destinations. Table 15 records data on traveler destinations. Altogether Rigdon identified 227 different destinations during the 11 sample years. Some of the locations were out of the state; many, however, were familiar settlements east and west of the Cascades. The Table identifies only those destinations to which three percent or more of the traveling parties were going. Care needs to be taken with this data because of the number of missing cases. The valid and missing case data is provided at the end of each year's compilation.

The destinations occurring frequently during the sample years include Summer Lake, Silver Lake, Chewaukan, Goose Lake, and Lakeview in Lake County. West of the Cascades the communities of Eugene, Springfield, Pleasant Hill, Cottage Grove, and Corvallis are among those to which a number of traveling parties were going. The destination data also reveals that the Oregon Central Military Wagon Road was used by pleasure seekers. A number of people said that their destinations were the Cascade Mountains, Crescent Lake, Summit Lake, Rigdon's or other wilderness locations. Obviously they had come to these places to fish, hunt, and camp.

TABLE 15
TRAVELER DESTINATIONS

1871

Destination	Frequency	Adjusted Frequency (%)
-------------	-----------	---------------------------

Rigdon did not record data in 1871 on traveler destinations.

1873

Destination	Frequency	Adjusted Frequency (%)
-------------	-----------	---------------------------

John Day	5	5.2
Goose Lake	34	35.1
Paluse	5	5.2
Ochoco	4	4.1
Klamath	5	5.2
Chewaucan	4	4.1

Valid Cases: 97
Missing Cases: 158

1875

Destination	Frequency	Adjusted Frequency (%)
-------------	-----------	---------------------------

Corvallis	5	3.0
Big Prairie	6	3.6
Springfield	6	3.6
Crescent	5	3.0
Crescent Lake	11	6.7
Silver Lake	8	4.8
Goose Lake	13	7.9
Summer Lake	12	7.3
Chewaucan	8	4.8

Valid Cases: 165
Missing Cases: 200

TABLE 15

1877

Destination	Frequency	Adjusted Frequency (%)
Corvallis	3	4.0
Eugene	7	9.3
Silver Lake	10	13.3
Goose Lake	4	5.3
Summer Lake	3	4.0
Prineville	3	4.0
Chewaucan	4	5.3
Valid Cases:	75	
Missing Cases:	186	

1879

Destination	Frequency	Adjusted Frequency (%)
Portland	3	5.8
Corvallis	2	3.8
Big Prairie	2	3.8
Eugene	5	9.6
Big Meadows	3	5.8
Silver Lake	7	13.5
John Day	2	3.8
Prineville	4	7.7
Shedds	3	5.8
Chewaucan	3	5.8
Valid Cases:	52	
Missing Cases:	166	

TABLE 15

1881

Destination	Frequency	Adjusted Frequency (%)
Slabtown	3	8.3
Eugene	2	5.6
Silver Lake	10	27.8
Goose Lake	3	8.3
Chewaucan	2	5.6
Valid Cases:	36	
Missing Cases:	126	

1883

Destination	Frequency	Adjusted Frequency (%)
Corvallis	2	3.3
Big Prairie	2	3.3
Eugene	2	3.3
Springfield	4	6.6
Silver Lake	11	18.0
Deschutes	5	8.2
Paisley	2	3.3
Lakeview	2	3.3
Cloverdale	2	3.3
Chewaucan	2	3.3
Rigdon's	2	3.3
Valid Cases:	61	
Missing Cases:	133	

TABLE 15

1885

Destination	Frequency	Adjusted Frequency (%)
Corvallis	4	3.2
Eugene	16	12.7
Springfield	5	4.0
Silver Lake	17	13.5
Deschutes	5	4.0
Pleasant Hill	5	4.0
Paisley	13	10.3
Cascade Mts.	4	3.2
Valid Cases:	126	
Missing Cases:	122	

1892

Destination	Frequency	Adjusted Frequency (%)
Eugene	41	12.7
Springfield	12	3.7
Silver Lake	23	7.1
Deschutes	25	7.8
Pleasant Hill	14	4.3
Pine Opening	32	9.9
Cottage Grove	13	4.0
Rigdon's	20	6.2
Valid Cases:	322	
Missing Cases:	47	

TABLE 15

1894

Destination	Frequency	Adjusted Frequency (%)
Portland	8	3.8
Creswell	7	3.4
Eugene	27	13.2
Silver Lake	21	10.2
Pleasant Hill	7	3.4
Paisley	7	3.4
Cottage Grove	7	3.4
Sanderson's Meadow	7	3.4
Rigdon's	17	8.3
Valid Cases:	205	
Missing Cases:	80	

1896

Destination	Frequency	Adjusted Frequency (%)
Creswell	6	3.1
Eugene	27	14.0
Crescent Lake	7	3.6
Silver Lake	20	10.4
Odell Lake	9	4.7
Deschutes	7	3.6
Pleasant Hill	7	3.6
Cottage Grove	6	3.1
Klamath Falls	6	3.1
Rigdon's	17	8.8
Dexter	6	3.1
Valid Cases:	193	
Missing Cases:	70	

Men

During the sample years between 1871 and 1896 men made extensive use of the Oregon Central Military Wagon Road. Of a total of 10,576 travelers, Rigdon identified 7,200 men. They were present in 2,819 parties. On only 13 occasions did parties cross over the road during the sample years when no men were present. Men constituted 68.1% of all travelers during the years sampled.

Rigdon's data also recorded the frequency of men in the traveling parties. The largest party was one of 87 men who passed over the road in 1892. Rigdon noted that they were bound for Fort Klamath. A total of 11 parties had 12 or more men in them. A total of 2,807 parties had 11 or fewer men in them (see Table 17). In 10 of the 11 sample years, between 86% and 95% of the traveling parties had four or fewer men. The exception was in 1871 when 69% of the parties had four or fewer men (See Table 18). The years in which no men were present in traveling parties were 1871, 1873, and 1875. This frequency was less than one percent in 1871 and 1875 and 3.9% in 1873 (see Table 19).

TABLE 16
MEAN AND MODE OF MEN IN TRAVELING PARTIES

Year	Mean	Mode	Standard Deviation
1871	3.9	2.0	3.5
1873	2.6	2.0	1.7
1875	2.6	1.0	1.8
1877	2.4	1.0	1.7
1879	2.6	2.0	1.7
1881	2.4	2.0	1.6
1883	2.5	1.0	1.9
1885	2.4	1.0	1.9
1892	2.6	1.0	5.6
1894	2.1	1.0	1.2
1896	2.3	2.0	1.3

The most commonly appearing number of men in travel groups was one; this figure occurred in six of the 11 sample years. Two men were found most commonly in five of the 11 sample years. The average number of men per party containing men was three in all years except 1871 when the average number was four (see Table 16).

TABLE 17
ABSOLUTE FREQUENCY OF MEN
IN TRAVELING PARTIES

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
No. in Party											
1	37	69	121	87	67	50	68	83	149	108	79
2	56	78	107	83	72	62	64	80	111	106	106
3	33	39	60	51	30	20	24	43	56	33	36
4	16	25	32	16	22	15	17	18	22	24	26
5	18	18	15	9	6	7	7	13	14	7	10
6	14	6	13	3	11	4	6	4	9	5	2
7	17	6	5	6	7	0	2	0	5	2	2
8	8	4	3	4	2	3	2	4	0	0	1
9	3	0	3	0	1	0	1	0	0	0	1
10	1	0	3	0	0	0	2	2	0	0	0
11	2	0	1	1	0	1	0	0	1	0	0
12	0	0	1	0	0	0	0	0	0	0	0
13	2	0	0	1	0	0	0	0	0	0	0
14	1	0	0	0	0	0	1	0	0	0	0
20	0	0	0	0	0	0	0	1	0	0	0
25	1	0	0	0	0	0	0	0	0	0	0
30	1	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	1	0	0
87	0	0	0	0	0	0	0	0	1	0	0
0	2	10	1	0	0	0	0	0	0	0	0

TABLE 18
ADJUSTED FREQUENCY (%) OF MEN
IN TRAVELING PARTIES

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
No. in Party											
1	17.6	28.2	33.2	33.3	30.7	30.9	35.1	33.5	40.4	37.9	30.0
2	26.7	31.8	29.4	31.8	33.0	38.3	33.0	32.3	30.1	37.2	40.3
3	15.7	15.9	16.5	19.5	13.8	12.3	12.4	17.3	15.2	11.6	13.7
4	7.6	10.2	8.8	6.1	10.1	9.3	8.8	7.3	6.0	8.4	9.9
5	8.6	7.3	4.1	3.4	2.8	4.3	3.6	5.2	3.8	2.5	3.8
6	6.7	2.4	3.6	1.1	5.0	2.5	3.1	1.6	2.4	1.8	0.8
7	8.1	2.4	1.4	2.3	3.2	0.0	1.0	1.6	1.4	0.7	0.8
8	3.8	1.6	0.8	1.5	0.9	0.0	1.0	0.0	0.0	0.0	0.4
9	1.4	0.0	0.8	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.4
10	0.5	0.0	0.8	0.0	0.0	0.0	1.0	0.8	0.0	0.0	0.0
11	1.0	0.0	0.3	0.4	0.0	0.6	0.0	0.0	0.3	0.0	0.0
12	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	1.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
25	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
63	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

TABLE 19

RELATIVE FREQUENCY (%) OF MEN
IN TRAVELING PARTIES

[illegible]

Women

Women made much less use of the Oregon Central Military Wagon Road than did men during the sample years in this study. Of a total of 10,576 travelers, Rigdon identified 1,473 women. The women constituted only 13.9% of the total traveler population in the years selected for study. Interestingly, however, on 13 occasions groups of women or women and children without men passed over this wilderness road by 1896.

The largest group of women was eight in 1871 with one traveling party. Only six times during the eleven sample years did parties contain six or more women (see Table 21). Between 53% and 77% percent of the time the traveling parties had no women in their ranks (see Table 22). In 10 out of 11 of the sample years those groups which contained women had three or fewer women in them 90% of all occasions. The exception was 1871 when 84% of the parties with women had three or fewer (see Table 23).

TABLE 20
MEAN AND MODE OF WOMEN IN TRAVLING PARTIES

Year	Mean	Mode	Standard Deviation
1871	1.9	1.0	1.4
1873	1.5	1.0	0.8
1875	1.8	1.0	1.0
1877	1.7	1.0	1.1
1879	1.6	1.0	0.8
1881	1.7	1.0	0.9
1883	1.7	1.0	1.1
1885	1.5	1.0	0.8
1892	1.5	1.0	0.9
1894	1.8	1.0	1.0
1896	1.6	1.0	1.0

Of all groups containing women the most commonly appearing number was one. The calculation of the Mean suggests that the average group with women in its ranks contained two women (see Table 20).

The Oregon Central Military Wagon Road was clearly dominated by male travelers during all of the sample years.

TABLE 21
ABSOLUTE FREQUENCY OF WOMEN
IN TRAVELING PARTIES

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
No. in Party											
1	52	54	57	47	31	25	37	50	54	43	44
2	23	28	39	12	18	12	24	13	21	27	20
3	9	7	15	7	4	5	10	6	8	10	3
4	10	1	0	5	3	3	1	3	0	4	2
5	4	1	4	1	0	0	1	0	2	1	3
6	1	0	0	1	0	0	0	0	0	1	0
7	0	0	1	0	0	0	1	0	0	0	0
8	1	0	0	0	0	0	0	0	0	0	0
0	112	164	249	188	162	117	120	176	284	199	191

TABLE 22
RELATIVE FREQUENCY (%) OF WOMEN
IN TRAVELING PARTIES

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
No. in Party											
1	24.5	21.2	15.6	18.0	14.2	15.4	19.1	20.2	14.6	15.1	16.7
2	10.8	11.0	10.7	4.6	8.3	7.4	12.4	5.2	5.7	9.5	7.6
3	4.2	2.7	4.1	2.7	1.8	3.1	5.2	2.4	2.2	3.5	1.1
4	4.7	0.4	0.0	1.9	1.4	1.9	0.5	1.2	0.5	1.4	0.8
5	1.9	0.4	1.1	0.4	0.0	0.0	0.5	0.0	0.5	0.4	1.1
6	0.5	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.4	0.0
7	0.0	0.0	0.3	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
8	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0	52.8	64.3	68.2	72.0	74.3	72.2	61.9	71.0	77.0	69.8	72.6

TABLE 23

ADJUSTED FREQUENCY (%) OF WOMEN
IN TRAVELING PARTIES

[illegible]

Children

Less than 20% of those who traveled over the Oregon Central Military Wagon Road during the years sampled were children. Stephen Rigdon recorded the passage of 1,993 children out of a total population of 10,576 during the sample years. A total of 2,166 parties traversed the road with no children in their ranks; 666 parties had children among their numbers. Between 63% and 84% of the time the traveling parties had no children with them (see Table 27).

Rigdon's data reveals information about the number of children in those 666 instances where children were with the traveling groups during the sample years.

TABLE 24

MEAN AND MODE OF CHILDREN IN TRAVELING PARTIES

Year	Mean	Mode	Standard Deviation
1871	3.7	1.0	2.5
1873	3.3	1.0	2.6
1875	3.5	1.0	2.7
1877	2.9	1.0	2.4
1879	2.4	1.0	1.4
1881	2.6	1.0	2.8
1883	2.9	1.0	2.1
1885	2.6	1.0	1.9
1892	2.2	1.0	1.6
1894	2.6	1.0	2.3
1896	3.2	1.0	3.3

Of those 666 traveling parties with children, in seven of the sample years the average number was four, while in four of the sample years the average number was three. The most frequently occurring number of children in all of the sample years with those parties containing children was one (see Table 24).

During the sample years the party with the largest number of children passed over the road in 1896; 22 children were in that contingent. In all but three years--1871, 1873, and 1877--the traveling groups with children more than 82% of the time had four or fewer children in their parties. In 1871, 1873, and 1875 four or fewer children occurred 71%, 76%, and 73% of the times respectively (see Table 26).

TABLE 25
ABSOLUTE FREQUENCY OF CHILDREN
IN TRAVELING PARTIES

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
No. in Party											
1	17	18	21	17	18	12	19	18	29	27	18
2	13	12	19	14	10	11	19	15	11	13	17
3	13	13	19	8	11	5	5	7	8	5	4
4	12	7	10	7	5	1	9	6	1	3	10
5	8	7	9	3	2	1	4	4	7	1	2
6	4	4	5	2	2	0	2	1	1	5	4
7	3	0	3	1	0	0	2	2	1	1	1
8	4	1	4	0	0	0	3	0	0	1	1
9	2	1	0	1	0	0	1	0	0	1	0
10	0	1	0	0	0	0	0	1	0	0	0
11	1	0	2	2	0	0	0	0	0	1	0
12	1	1	0	0	0	1	0	0	0	0	1
13	0	1	1	0	0	1	0	0	0	0	0
14	0	0	1	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	1
0	134	189	271	206	170	130	130	194	311	227	204

TABLE 26

ADJUSTED FREQUENCY (%) OF CHILDREN
IN TRAVELING PARTIES

[illegible]

TABLE 27

RELATIVE FREQUENCY (%) OF CHILDREN
IN TRAVELING PARTIES

[illegible]

Wagons

Although the Oregon Central Military Wagon Road crosses many streams and leads through the slopes of the Cascades to a pass near Summit Lake, the route had extensive use as a wagon route in the nineteenth century. This had been the intention of Congress when the route was funded. Rigdon's data suggests that steady passage of wagons continued through the last three decades of the 1800's. In the sample years he recorded a total of 2,548 wagons which used this road between 1871 and 1896.

TABLE 28
MEAN AND MODE OF WAGON USE

Year	Mean	Mode	Standard Deviation
1871	1.8	1.0	1.1
1873	1.5	1.0	0.9
1875	1.5	1.0	0.9
1877	1.4	1.0	0.8
1879	1.4	1.0	0.7
1881	1.3	1.0	0.6
1883	1.4	1.0	0.9
1885	1.3	1.0	0.6
1892	1.3	1.0	0.5
1894	1.3	1.0	0.8
1896	1.4	1.0	0.8

Commonly one wagon passed over the road with each group that was traveling. The Mean suggests that two wagons were found on an average with those groups which possessed wagons (see Table 28). The greatest number of wagons in a traveling party was nine; this number occurred only twice--in 1875 and in 1883.(see Table 29). In the years 1875-96 more than 90% of the time the number of wagons in a party was two or less. The figures for 1871 and 1873 were 81% and 88% for two or less wagons (see Table 30).

Every year a number of parties passed over the road with no wagons. The greatest number in this category was 143 parties without wagons in 1892; the smallest number to use the road without wagons was 58 in 1881 (see Table 29).

TABLE 29
ABSOLUTE FREQUENCY OF WAGONS

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
No. in Party											
1	71	92	171	111	81	82	95	124	173	155	136
2	42	33	49	30	36	16	30	19	48	31	34
3	15	9	13	7	5	4	6	9	4	7	8
4	6	6	10	2	2	2	1	3	1	2	3
5	2	2	0	1	1	0	0	0	0	1	1
6	3	0	0	0	0	0	1	0	0	2	0
7	0	0	0	1	0	0	0	0	0	0	1
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	1	0	0	0	1	0	0	0	0
0*	73	113	121	109	93	58	60	93	143	87	80

*This figure identifies the number of instances when parties crossed the road and had no wagons.

Total of Wagons	216	219	357	212	181	134	192	201	285	263	252
-----------------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

TABLE 30
ADJUSTED FREQUENCY (%) OF WAGONS

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
No. in Party											
1	51.1	64.8	70.1	73.0	64.8	78.8	70.9	80.0	76.5	78.3	74.3
2	30.2	23.2	20.1	19.7	28.8	15.4	22.4	12.3	21.2	15.7	18.6
3	10.8	6.3	5.3	4.6	4.0	3.8	4.5	5.8	1.8	3.5	4.4
4	4.3	4.2	4.1	1.3	1.6	1.9	0.7	1.9	0.4	1.0	1.6
5	1.4	1.4	0.0	0.7	0.8	0.0	0.0	0.0	0.0	0.5	0.5
6	2.2	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.0	0.0
7	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.5
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.0	0.4	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0

Horses

During the sample years a total of 13,148 horses passed over the Oregon Central Military Wagon Road. Since there were 10,576 travelers during this period, the number of horses exceeds that of humans by 2,572. The total number of horses suggests that a number of road users drove more horses than those needed for transportation. This becomes even more evident when considering the record of 1,802 wagons during these same years. It is reasonable to assume that many of the women and children who traveled the road took passage in wagons and even further reduced the ratio of humans to horses. Of 2,824 parties using the road in the sample years, 2,724 had horses with them.

TABLE 31
MEAN AND MODE OF HORSES IN TRAVELING PARTIES

Year	Mean	Mode	Standard Deviation
1871	8.3	2.0	9.7
1873	5.6	2.0	4.8
1875	4.9	2.0	4.3
1877	4.5	2.0	3.6
1879	5.2	2.0	5.1
1881	4.6	2.0	4.2
1883	4.8	2.0	4.9
1885	4.4	2.0	5.9
1892	4.2	2.0	5.3
1894	3.7	2.0	3.5
1896	3.8	2.0	3.7

Throughout the sample years the most frequently appearing number of horses was two among those parties having horses. The Mean, however, indicates that the average number of horses ranged between four and eight (see Table 31).

The largest herds of horses passed over the route in 1871; two herds each with 84 animals used the road that year. Fifty-five herds used the road during the sample years that numbered more than 20 horses each. The Adjusted Frequency shows that in the years 1873-96 between 58% and 76% of the time the horse herds numbered four or fewer. The exception was in 1871 when only 40% of the herds with traveling groups were four or fewer; 1871 was, of course, the peak year for large herds (see Table 32).

TABLE 32
ABSOLUTE AND ADJUSTED (%) FREQUENCY OF HORSES
IN TRAVELING PARTIES

1871

No. of Horses	Frequency	Adjusted %	No. of Horses	Frequency	Adjusted %
1	10	5.0	15	3	1.5
2	29	14.4	16	3	1.5
3	19	9.4	17	2	1.0
4	24	11.9	18	1	0.5
5	11	5.4	19	2	1.0
6	15	7.4	20	3	1.5
7	15	7.4	22	1	0.5
8	7	3.5	23	1	0.5
9	8	4.0	24	1	0.5
10	13	6.4	25	1	0.5
11	14	6.9	33	1	0.5
12	3	1.5	36	2	1.0
13	4	2.0	84	2	1.0
14	7	3.5	0	10	-

1873

No. of Horses	Frequency	Adjusted %	No. of Horses	Frequency	Adjusted %
1	18	7.6	13	4	1.7
2	43	18.2	14	3	1.3
3	33	14.0	15	1	0.4
4	42	17.8	16	2	0.8
5	22	9.3	17	1	0.4
6	18	7.6	19	1	0.4
7	10	4.2	21	1	0.4
8	6	2.5	22	1	0.4
9	6	2.5	23	3	1.3
10	10	4.2	24	1	0.4
11	3	1.3	25	1	0.4
12	5	2.1	26	1	0.4
			0	19	-

TABLE 32 (Cont.)

1875

No. of Horses	Frequency	Adjusted %	No. of Horses	Frequency	Adjusted %
1	33	9.2	12	8	2.2
2	96	26.9	13	5	1.4
3	43	12.0	14	3	0.8
4	49	13.7	15	1	0.3
5	29	8.1	16	6	1.7
6	24	6.7	17	1	0.3
7	22	6.2	18	2	0.6
8	10	2.8	20	1	0.3
9	8	2.2	21	1	0.3
10	5	1.4	32	1	0.3
11	8	2.2	35	1	0.3
			0	8	-

1877

No. of Horses	Frequency	Adjusted %	No. of Horses	Frequency	Adjusted %
1	22	8.7	10	5	2.0
2	81	31.9	11	4	1.6
3	35	13.8	12	10	3.9
4	30	11.8	13	3	1.2
5	14	5.5	16	2	0.8
6	15	5.9	18	1	0.4
7	11	4.3	28	1	0.4
8	10	3.9	0	7	-
9	10	3.9			

TABLE 32 (Cont.)

1879

No. of Horses	Frequency	Adjusted %	No. of Horses	Frequency	Adjusted %
1	25	12.0	13	1	0.5
2	47	22.5	14	1	0.5
3	29	13.9	15	1	0.5
4	35	16.7	16	1	0.5
5	15	7.2	17	4	1.9
6	12	5.7	19	2	1.0
7	6	2.9	20	1	0.5
8	11	5.3	21	2	1.0
9	4	1.9	22	3	1.4
10	4	1.9	25	1	0.5
11	3	1.4	32	1	0.5
			0	9	-

1881

No. of Horses	Frequency	Adjusted %	No. of Horses	Frequency	Adjusted %
1	13	8.3	10	6	3.8
2	55	35.0	11	6	3.8
3	16	10.2	12	3	1.9
4	21	13.4	13	1	0.6
5	14	8.9	14	2	1.3
6	7	4.5	15	1	0.6
7	5	3.2	20	1	0.6
8	3	1.9	35	1	0.6
9	2	1.3	0	5	-

TABLE 32 (Cont.)

1883

No. of Horses	Frequency	Adjusted %	No. of Horses	Frequency	Adjusted %
1	15	7.8	12	2	1.0
2	57	29.7	13	3	1.6
3	29	15.1	14	3	1.6
4	27	14.1	15	1	0.5
5	13	6.8	20	1	0.5
6	15	7.8	22	1	0.5
7	3	1.6	23	1	0.5
8	7	3.6	24	1	0.5
9	6	3.1	26	1	0.5
10	2	1.0	40	1	0.5
11	3	1.6	0	2	-

1885

No. of Horses	Frequency	Adjusted %	No. of Horses	Frequency	Adjusted %
1	30	12.8	12	2	0.9
2	83	35.3	13	3	1.3
3	28	11.9	14	3	1.3
4	33	14.0	17	1	0.4
5	15	6.4	26	1	0.4
6	12	5.1	30	1	0.4
7	5	2.1	52	1	0.4
8	3	1.3	56	1	0.4
9	2	0.9	0	13	-
10	9	3.8			
11	2	0.9			

TABLE 32 (Cont.)

1892

No. of Horses	Frequency	Adjusted %	No. of Horses	Frequency	Adjusted %
1	56	16.2	12	4	1.2
2	122	35.4	13	2	0.6
3	33	9.6	14	5	1.4
4	47	13.6	15	3	0.9
5	8	2.3	17	1	0.3
6	26	7.5	18	1	0.3
7	14	4.1	22	1	0.3
8	6	1.7	39	1	0.3
9	3	0.9	40	1	0.3
10	8	2.3	63	1	0.3
11	2	0.6	0	24	-

1894

No. of Horses	Frequency	Adjusted %	No. of Horses	Frequency	Adjusted %
1	31	11.1	11	2	0.7
2	105	37.5	12	2	0.7
3	43	15.4	13	1	0.4
4	34	12.1	14	1	0.4
5	21	7.5	17	1	0.4
6	21	7.5	18	1	0.4
7	7	2.5	23	2	0.7
8	4	1.4	26	1	0.4
9	1	0.4	27	1	0.4
10	1	0.4	0	5	-

TABLE 32 (Cont.)

1896

No. of Horses	Frequency	Adjusted %	No. of Horses	Frequency	Adjusted %
1	25	9.7	11	1	0.4
2	102	39.7	13	1	0.4
3	30	11.7	15	1	0.4
4	35	13.6	16	1	0.4
5	14	5.4	18	1	0.4
6	20	7.8	20	1	0.4
7	11	4.3	21	1	0.4
8	5	1.9	39	1	0.4
9	3	1.2	0	6	-
10	4	1.6			

Cattle

By the 1870's the grasslands of central and southeastern Oregon had drawn in both sheep and cattle raisers. The Oregon Central Military Wagon Road became an important route for the movement of livestock in the succeeding three decades. In the sample years between 1871 and 1896 a total of 21,182 head of cattle passed over this road with 237 different parties of drovers. The greatest number of herds was taken over the route in 1871, when 61 different parties drove cattle along the road. The smallest number of herds--8 in all--passed over the road in 1881.

TABLE 33
MEAN AND MODE OF CATTLE

Year	Mean	Mode	Standard Deviation
1871	81.7	10.0	80.9
1873	42.4	10.0	29.8
1875	87.5	1.0	121.4
1877	133.2	2.0	152.1
1879	118.3	1.0	152.0
1881	205.1	2.0	164.7
1883	126.5	12.0	178.0
1885	101.1	1.0	236.6
1892	87.8	3.0	95.0
1894	41.6	2.0	60.1
1896	47.2	1.0	90.8

Table 34 charts the Absolute Frequency of Cattle on the road during the sample years. This Table clearly shows the wide range in the size of the herds. Seventeen of the 237 herds contained more than 300 head of cattle; the largest on the road were one with 730 head in 1883 and another with 843 head in 1885. Another 13 herds contained between 200 and 299 cattle, while 41 herds had between 100 and 199 head. Seventy-one of the 237 herds had 100 or more cattle in them. The Oregon Central Military Wagon Road was thus an important route for the movement of livestock between Central Oregon and the upper Willamette Valley in the nineteenth century.

TABLE 34

ABSOLUTE FREQUENCY OF CATTLE

[illegible]

TABLE 34 (Cont.)

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
No. in Herd											
95	0	1	2	0	0	0	0	0	0	0	0
97	0	0	0	0	0	0	1	0	0	0	0
99	1	0	1	0	0	0	0	0	0	0	0
100	1	0	0	1	0	0	0	0	0	1	0
102	0	0	0	0	0	0	1	0	1	0	0
104	0	0	0	0	0	0	0	0	0	1	0
105	1	0	0	0	0	0	0	0	0	0	0
107	1	0	0	0	0	0	0	0	0	0	0
112	1	0	0	0	0	0	0	0	0	0	0
113	0	0	0	1	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	1	0	0
123	0	0	0	0	0	0	0	0	1	0	0
124	1	0	0	0	0	0	0	0	0	0	0
125	0	0	0	1	0	0	0	0	0	0	0
127	0	0	0	1	0	0	0	0	0	0	0
130	1	0	0	0	0	0	0	0	0	0	0
135	1	0	0	0	0	0	0	0	0	0	0
136	0	0	0	1	0	1	0	0	0	0	0
139	0	0	0	0	0	0	0	0	1	0	0
141	0	0	0	0	0	0	0	0	1	0	0
149	1	0	0	0	1	0	0	0	0	0	0

TABLE 34 (Cont.)

Year	1871	1873	1875	1877	1879	1881	1883	1885	1892	1894	1896
No. in Herd											
257	1	0	0	0	0	0	0	0	0	0	0
278	0	0	0	0	0	0	0	0	0	0	1
282	0	0	0	1	0	0	0	0	0	0	0
291	0	0	0	0	0	0	0	1	0	0	0
300	0	0	1	0	1	0	0	0	0	0	0
312	0	0	0	0	0	0	0	0	1	0	0
315	0	0	0	0	0	0	1	0	0	0	0
329	0	0	0	0	0	1	0	0	0	0	0
360	0	0	0	0	1	0	0	0	0	0	0
370	0	0	0	0	1	0	0	0	0	0	0
374	1	0	0	0	0	0	0	0	0	0	0
376	0	0	0	0	1	0	0	0	0	0	0
390	0	0	0	1	0	0	0	0	0	0	0
400	0	0	0	0	0	1	0	0	0	0	0
427	0	0	0	0	0	1	0	0	0	0	0
430	0	0	0	1	0	0	0	0	0	0	0
486	0	0	0	1	0	0	0	0	0	0	0
573	0	0	1	0	0	0	0	0	0	0	0
730	0	0	0	0	0	0	1	0	0	0	0
843	0	0	0	0	0	0	0	1	0	0	0

Sheep

In the latter years of the nineteenth century a period of boom in the sheep and range cattle industries developed in south-central and southeastern Oregon. The transit of sheep over the Oregon Central Military Wagon Road during the sample years testifies to the development of those industries. A total of 33,874 sheep--more than any other type of livestock--passed over the road during the eleven sample years. Only 43 parties out of 2,824, however, drove sheep. This indicates that flock size was large and that the transit of sheep was, at best, irregular.

During the sample years between 1871 and 1896 a total of thirteen flocks passed over the road and contained in excess of 1,000 head. The largest flock of 2,500 head used the road in 1871. On the basis of the years sampled, the 1870's were the peak period for sheep movement over the road. Flocks of 8,881 used the road in 1871; 7,094 crossed over it in 1873 (see Table 36).

TABLE 35
MEAN AND MODE OF SHEEP

Year	Mean	Mode	Standard Deviation
1871	1075.7	800	822.0
1873	616.3	650	447.2
1875	543.7	400	508.2
1877	0.0	0	0.0
1879	869.2	800	560.8
1881	0.0	0	0.0
1883	1650.0	1600	70.7
1885	0.0	0	0.0
1892	0.0	0	0.0
1894	933.0	860	103.2
1896	0.0	0	0.0

Because of the limited number of times that sheep flocks used the Oregon Central Military Wagon Road the calculation of the Mean and Mode are not particularly relevant. The Mode does indicate, however, that the most commonly appearing flock size was large; indeed, the smallest modal number is 400. (See Table 35).

TABLE 36
ABSOLUTE AND ADJUSTED (%) FREQUENCY OF SHEEP
IN TRAVELING PARTIES

1871

No. of Sheep	Frequency	Adjusted %
1	1	11.1
130	1	11.1
800	2	22.2
1000	1	11.1
1100	1	11.1
1200	1	11.1
2150	1	11.1
2500	1	11.1
0	203	-

1873

No. of Sheep	Frequency	Adjusted %
5	1	6.7
62	1	6.7
200	1	6.7
290	1	6.7
400	1	6.7
470	1	6.7
500	1	6.7
528	1	6.7
650	2	13.3
651	1	6.7
900	1	6.7
938	1	6.7
1500	2	13.3
0	240	-

TABLE 36

1875

No. of Sheep	Frequency	Adjusted %
11	1	10.0
16	1	10.0
20	1	10.0
350	1	10.0
400	2	20.0
800	1	10.0
880	1	10.0
1010	1	10.0
1550	1	10.0
0	355	-

1877

No. of Sheep	Frequency	Adjusted %
0	261	-

1879

No. of Sheep	Frequency	Adjusted %
6	1	20.0
800	2	40.0
1340	1	20.0
1400	1	20.0
0	213	-

TABLE 36

1881

No. of Sheep	Frequency	Adjusted %
0	162	-

1883

No. of Sheep	Frequency	Adjusted %
1600	1	50.0
1700	1	50.0
0	192	-

1885

No. of Sheep	Frequency	Adjusted %
0	248	-

1892

No. of Sheep	Frequency	Adjusted %
0	369	-

TABLE 36

1894

No. of Sheep	Frequency	Adjusted %
860	1	50.0
1006	1	50.0
0	283	-

1896

No. of Sheep	Frequency	Adjusted %
0	263	-

The Oregon Central Military Wagon Road in the Courts

The expectations of Congress and the general public in the 1860's were that the granting of vast tracts of public lands to private companies for the construction of wagon roads and railroads would speed the development of free or inexpensive transportation throughout the American West. The faith of Congress in these schemes was witnessed not only in the act (13 Stat. 355) of July 2, 1864, granting lands for the Oregon Central Military Wagon Road, but in subsequent measures also directed to Oregon.

On July 5, 1866, Congress passed an act (14 Stat. 89) providing for a land grant, again to the State of Oregon, for the Willamette Valley and Cascade Mountain Wagon Road. The route was to reach from Albany, Oregon, over the Cascades to Boise, Idaho, by way of Canyon City and the Harney Basin. This same Congress also approved a land grant for a military road from Corvallis, Oregon, west to Yaquina Bay through the Coast Range. The act (14 Stat. 409) of February 25, 1867, granted to the state lands to subsidize the Dalles Military Road. This route was to be built from The Dalles on the Columbia Plateau to Canyon City and on to Boise. In 1869 Congress provided for a fifth wagon road to reach from Roseburg, Oregon, to Coos Bay. The Coos Bay Wagon Road was to cross the Coast Range in the southwest part of the state (Jackson 1949: 23-29).

While applauded initially, these land grants soon raised a variety of criticisms. Among the difficulties of the Oregon Central Military Wagon Road was that its surveyors had turned the route south in the Deschutes watershed and laid out a road through the heart of the newly designated Klamath Indian Reservation. Although the Klamath Treaty of 1864 was not ratified until 1870, this agreement called for the Indians to cede 20,000,000 acres for \$80,000 and a reservation of 2,000,000 acres. The Oregon Central Military Wagon Road Company, however, claimed 108,210 acres within the reservation. The stage was set for legal battles about whether the Indian or the company interest would prevail. The lands in question were the lush meadows of Klamath Marsh and the Sprague Valley. The company owners knew of their excellent potential for stock raising; the Bureau of Indian Affairs was also aware of this potential and its linkage to the programs of turning the Indians into farmers and stock raisers (O'Callaghan 1952: 23-25; Stern 1965: 88-89).

The Oregon Central Military Wagon Road Company halted construction and maintenance of its road in 1870. At that date the company had built and improved the road from Eugene to the Deschutes River. It had opened a road from the Deschutes to Fort Klamath and east into the watershed of the Sprague. The investors had expended little work in grading or bridging in the descent of Drews Creek, the crossing of the Goose Lake Valley, or in the Warner Valley. An identifiable road trace, however, reached to Beaty's Butte in southeastern Oregon and travelers from as far east as the Harney Basin had used the road.

William Odell recalled in 1886 that he had worked on improvements in the Steens Mountain region. His men had graded, bridged creeks, and removed rocks from the projected road bed (U. S. Senate 1887: 1-77; U. S. Senate 1888: 326-84).

In October, 1874, the Oregon Central Military Wagon Road Company sold its interests. As the company began taking title to its lands it faced the burden of paying taxes on those properties. Since much of its grant was in a wilderness area, the prospect of immediate return was slim. In the long term the lands would prove to be very valuable. In the 1870's, however, homeseekers readily elected to homestead lands in the even-numbered sections rather than purchase tracts in the odd-numbered sections from the road company. William S. Ladd, Portland financier and president of the company since May 23, 1871, recalled in 1886:

That the original object of the corporation aforesaid was to open up a means of communication and transportation of freights and stock from the Willamette Valley and the eastern part of the State, and the development of that portion of the State, and not for speculative purposes, and after the completion of said wagon road, such object having been accomplished, at the request of the directors and stockholders of said company I opened negotiations in New York, London, and other places for the sale of the lands theretofore granted to said company to aid in the construction of said road.

That such negotiations were pending for more than two years without success.

Ladd found that at the same time the tax pressures were mounting. On the patented lands the company had, by 1874, paid over \$12,000 in tax assessments (U. S. Senate 1887: 83-84).

The Oregon Central Military Wagon Road Company had managed to sell about 7,000 acres of its patented lands by 1874. It earned from these transactions \$13,000. The firm's total expenditures on construction were estimated at \$128,000. When it sold its interests in 1874 to the California and Oregon Land Company, the stock holders unanimously approved the sale. Stephen Rigdon later recalled that he owned one share in the company which he had purchased for \$250. When the company sold out he received \$255 (U. S. Senate 1888: 335). The successor in interest was the California and Oregon Land Company. The new president was E. B. Pond of San Francisco, California (U. S. Senate 1887: 83-85).

The California and Oregon Land Company did not send out construction crews and did not provide for maintenance of the wagon road. It did, however, pursue the transfer of land patents eagerly. The new investors knew that a potential 806,400 acres were available under the

the terms of the grant. Since public pressure began to mount to abrogate the grant because of dissatisfaction with the road, the California-based company pressed for the patenting of its lands. By 1888 it had secured 235,568.91 acres; 570,831.09 acres remained in state control but were certified for transfer to the road company. One price the company had to pay was in taxes. Between 1875 and 1885 the investors paid out \$29,521.60 in tax assessments, while they had sold only 640 acres and earned about \$5,000 rent income (U. S. Senate 1887: 84-85; U. S. Senate 1888: 4).

Public irritation with all of these road companies in Oregon continued to grow in the 1870's. Clearly some of the ventures were designed to acquire vast tracts of land with little attention being paid to the building of the roads. Virulent animosities grew in the valley of the Crooked River as the company which allegedly built the Willamette Valley and Cascade Mountain Wagon Road held on to its fertile lands. This firm's charging of tolls on what was to be a free thoroughfare increased the hostilities (U. S. Senate 1888: 25).

By 1881 the federal government had heard so many complaints from Oregon about the road companies and their noncompliance with the terms of the land grants that high officials began to take notice. That year Secretary of the Interior Carl Schurtz recommended to the House of Representatives that it revest the remaining lands due to the Willamette Valley and Cascade Mountain Wagon Road Company. The response in Congress was that the lands had been granted, conferred to the State of Oregon, and had been patented to the company and that the only recourse was judicial action. The members of the House of Representatives felt that they had no power to take back the lands (U. S. Senate 1888: 4).

The unhappiness continued to mount. In a special session of the Oregon Legislature in 1885 the representatives adopted a memorial to Congress in which they spelled out what they perceived to be a major land fraud. That year the legislature had set up a three member commission to investigate whether or not the wagon roads had actually been built per the terms of the grants. The commissioners were specifically to travel over the Oregon Central Military Wagon Road, the Dalles Military Wagon Road, and the Willamette Valley and Cascade Mountain Wagon Road. Although they examined two of the routes carefully and took several depositions, none of the commissioners examined the Oregon Central Military Wagon Road. Nevertheless, the commission reported on the Oregon Central Military Wagon Road Company: "The said company have built or constructed no road whatever along their route, neither bridged, cleared nor repaired any already built, and the only roads in the country along said route have been constructed by emigrants and settlers, and are not the road contemplated by the acts of Congress" (U. S. Senate 1887: 7-8).

In light of these findings, the Oregon Legislature instructed the

Governor, Secretary of State, and the State Land Board to halt any further patenting of lands to the road companies. Further, the legislature called upon Congress to take action on the certified but unpatented lands: these Congress was asked to abolish, vacate, and annul. In no terms did the Oregon legislators want any further land transfers to occur. The legislature also sought Congress to get the Justice Department to bring legal action against the companies to revest the patented lands which they had allegedly obtained "by false and fraudulent representations" (U. S. Senate 1888: 4-5).

The Oregon Memorial was submitted to the Forty-Ninth Congress which referred the matter to the Committee on Public Lands with the instruction to "inquire into the truth of each and all of said allegations, and if found to be true, to report to the Senate by bill, or otherwise, what, if any, action can or should be rightfully or properly be taken by Congress in the premises." The Committee did present a bill which called in certain cases for the forfeiting of the wagon road grants but no action was taken on it. Another bill was then introduced in the Fiftieth Congress and the matter was again referred to the Committee on Public Lands. Further investigations by the Department of the Interior led to the observation in March, 1888: "the conditions on which the grants were made have not been fairly complied with in a single particular; that it was evidently the purpose of the grantees to obtain the granted lands with scarcely a semblance of performance of the corresponding duties . . ." (U. S. Senate 1888: 5).

The Interior Department report, based upon the taking of depositions from thirty-two men who had worked on the road, held an interest in the company, or had lived near the Oregon Central Military Wagon Road, concluded that the total outlay for construction was \$24,000. In light of this the Interior Department recommended revestment of all lands certified but not patented and action by the Justice Department for the patented properties (U. S. Senate 1888: 6).

In February, 1889, the Committee on Public Lands again addressed the purported frauds in connection with Oregon's wagon roads. After an extensive review of the materials and depositions, the Committee reported:

In the opinion of the committee there are some portions of the lands along each of these roads that can not honestly be forfeited, others may be doubtless. But what particular lands may be forfeited and what others can not be forfeited can not be fairly determined from the evidence before Congress. There are people claiming these lands some of whom own lands to which no fraud attached; others own lands which they purchased in good faith, without notice of fraud, and for value, with the records made by the United States Government, showing to them a perfect legal title, and still other owners who may have known of the fraud and may be participated in

it. It is not just, it can not be honest, to treat all these people alike

The recommendation of the committee was to pass the matter on for adjudication by the courts (U. S. House 1889: 25-27).

The case against the Oregon Central Military Wagon Road Company came to trial in Portland, Oregon, before federal Judge Matthew Paul Deady. The litigation sought to cancel the patents of land which were then held by the original company's successor in interest, the California and Oregon Land Company. Judge Deady ruled on May 25, 1891, that the patented lands--235,568.91 acres--could not be revested and rightfully belonged to the company which had bought out the original investors. The court decision was twice appealed but sustained. The remaining 470,834.09 acres, however, were not patented to the company. The Booth-Kelly Lumber Company secured by the turn of the twentieth century the lands of the California and Oregon Land Company. These the lumber company began liquidating in 1906 to investors from the upper Middle West (Clark, vol. 1, 1927: 489-90). The cases against the various road companies are reported in: 40 Fed. 114; 40 Fed. 120; 42 Fed. 351; 140 U. S. 600; 49 Fed. 500; and 55 Fed. 712. (Anonymous 1906).

On March 3, 1905, Congress moved to settle the issue of the wagon road lands within the Klamath Indian Reservation. The matter had come to a head because of the attempt to allot lands in severalty on the reservation. The question of title to over 100,000 acres was unclear. Negotiations between the government and the Booth-Kelly Lumber Company led to the offer to exchange the wagon road grant parcels for a consolidated tract of 87,000 acres of ponderosa pine near Yamsey Mountain in the Klamath Basin. The "trade" parcel was also part of the reservation and was one of the finest stands of timber in the south-central part of the state. Congress authorized \$108,750 to pay the Klamath Indians if they would agree to this plan (O'Callaghan 1952: 26).

The Klamath Indians resisted the pressures to make this exchange. Reportedly, however, their agent, H. G. Wilson, told them that they had to take the \$108,750 or get nothing. Reluctantly they signed. Almost at once it was clear that the Indians had been defrauded. In 1907 the *Oregonian* reported that the Indians had lost between two and three million dollars in the deal. In 1918 the Long Bell Lumber Company bought the Yamsey Mountain Tract for \$3,700,000. In the 1920's and the 1930's the Klamaths sought in vain in the Court of Claims for a just compensation. On May 15, 1936, they secured a new jurisdictional act and they sued once more. On April 25, 1938, the U. S. Supreme Court upheld the lower court decision to award the Klamaths \$5,313,347.32--the value of the lands in 1906 plus interest. The final contention over the lands involved in the Oregon Central Military Wagon Road grant had at last been settled.

Twentieth Century Use of the Route

No comparable data base exists in the twentieth century to the unique compilation of travel statistics made by Stephen Rigdon at his cabin on the headwaters of the Middle Fork of the Willamette River in the years 1871-96. The Oregon Central Military Wagon Road, however, continued to have a very similar pattern of use until the 1920's when the new Oregon Highway Commission (created in 1917) began the construction of road systems over the Cascades and eventually began paving these routes.

With the opening of highways over the Santiam passes, the Mount Hood Loop, and eventually McKenzie Pass, the Oregon Central Military Wagon Road route slipped into obscurity. In 1912, however, the map of the Cascade National Forest, a predecessor of the Willamette National Forest, clearly identified the route as a major access into the Middle Fork of the Willamette. Along its margins the U. S. Forest Service then maintained a series of ranger stations: West Boundary, Willamette, North Fork, Flat Creek, Bull Creek, and Rigdon. These government posts were to protect the forest resources set aside by executive order of President Theodore Roosevelt (Meekham 1912).

In 1925 the Oregon Central Military Wagon Road continued to have its historic identification, at least on U. S. Forest Service maps. The route, then maintained as the major access into the forest lands along the Middle Fork of the Willamette River, had ranger stations at North Fork (near West Fir) and at Rigdon, the old site where Stephen and Zilpha (Bristow) Rigdon kept their station for travelers (Flach and Washburn 1925).

In the 1930's the Civilian Conservation Corps carried out major improvements to the access systems of the Willamette National Forest. Both trails and roads received the attention of this Depression Era agency. Among the routes extensively "improved" was the Oregon Central Military Wagon Road. The CCC crews cleared, straightened, and covered with rock many miles of this road. Following World War II the U. S. Forest Service continued these improvements to the road. Eventually in the 1960's paving began. Slowly the memory of the old wagon route began to wane. Thundering logging trucks replaced the ox and horse teams lumbering along the Middle Fork of the Willamette River.

IV. PREVIOUS HISTORIC RESEARCH

The history of transportation in Oregon has had but irregular and incomplete assessment in the twentieth century. The greatest concentration of studies has focused upon railroad systems or the steam and sail boats which plied the rivers and coastal waters of the territory and state. The bulk of narrative histories has concentrated upon the primary emigrant routes, especially the Oregon Trail. Oregon's wagon roads have received but scant mention in the histories of the region.

The contemporary published information on this route, material utilized in the writing of this study, appeared in the *Oregon State Journal* (Eugene, Oregon) during the construction of the road in the 1860's. The litigation over the wagon road grants in Oregon in the latter part of the nineteenth century included the Oregon Central Military Wagon Road. Dozens of pages of testimony of witnesses and the findings of investigators appeared in 1887-88 in *Senate Executive Document No. 124*, 50 Cong., 1 Sess. (U. S. Senate 1887-88).

The first attempt to write a partial history of the road was mounted in the 1930's by Henrietta Steinke Bruce, a student at the University of Oregon. In 1936 Bruce submitted her M.A. Thesis in the Department of History. Her project was entitled "A History of the Oregon Central Military Wagon Road Company With Reference to the Histories of Four Other Land Grant Companies in the State of Oregon." Although never published, Bruce's study is the most important history of the route until the present work. She utilized both the contemporary newspaper accounts as well as the Congressional documents relating to the road. Her study did not, however, employ any of the Rigdon papers or involve any field reconnaissance (Bruce 1936).

Peripheral mention of the road was made by W. Turrentine Jackson in his article "Federal Road-Building Grants for Early Oregon" in the *Oregon Historical Quarterly* (Jackson 1949) and in his *Wagon Roads West: A Study of Federal Road Surveys and Construction in the Trans-Mississippi West, 1846-1869* (Jackson 1952). In 1959 L. C. Merriam edited the diary of Lt. John Marshall McCall, the army officer in charge of the military escort which during the summer of 1865 accompanied B. J. Pengra during his survey of the road (Merriam 1959). In 1976-78 Leah Collins Menefee and Lowell Tiller had published in the *Oregon Historical Quarterly* their article "Cutoff Fever," a history of the Free Emigrant Route. Although not identical with the Oregon Central Military Wagon Road, this route traversed much of the same territory in the Middle Fork of the Willamette River and thus is an important collateral reference (Menefee and Tiller 1976-78).

In the late 1960's the Willamette National Forest began a program

to interpret the history of the Oregon Central Military Wagon Road and the Free Emigrant Route. This project developed a two page typescript, "A Plan to Monument Significant Points on the Oregon Central Military Wagon Road and the Lost Wagon Train of 1853" (Anonymous n.d.). The Forest Service staff developed copy for four different signs to be mounted at ten locations along the route between Oakridge and Summit Lake.

None of the previous research has adequately placed the Oregon Central Military Wagon Road in a regional context. The present project has attempted to accomplish that objective.

V. METHODOLOGY

The research design was oriented toward a maximum recovery of relevant data both in terms of library research and field reconnaissance. The first efforts were focused upon a rigorous literature search. This began with review of the contemporary newspaper articles in the *Oregon State Journal* (Eugene, Oregon) during the construction of the road. This was followed by a careful examination of the federal court records of the 1880's when the land grant for the road was under challenge. Every effort was mounted during this review of the extant literature to locate diaries, letters, and other manuscripts relevant to the road. Among the most valuable of the materials located during this part of the research were the Stephen Rigdon papers in the Manuscripts Division of the Oregon Historical Society.

In anticipation of the field reconnaissance extensive effort was made to locate all maps which identified the route of the Oregon Central Military Wagon Road. The road route, as certified by Oregon governors, was found in the State Archives in Salem, Oregon. Most valuable, however, in this stage of research were the Cadastral Survey maps in the BLM Archives in Portland, Oregon. These original township maps and their accompanying field notes, prepared in the nineteenth century, clearly fixed the route of the road in each section which was to be covered during the field work.

Only when these sources had been carefully studied, noted, and entered on working maps did the field procedures begin. This approach appeared to be logical and had also proved to be the most productive in light of the principal investigator's prior study of the Barlow Road for the Mount Hood National Forest. When this labor was complete the investigator visited the road with knowledgeable Forest Service personnel who pointed out segments that they knew and suggested additional map materials in Forest Service records.

The field reconnaissance was conducted from west to east. Since maps and documentary data indicated that the road route was consistently on the north or east bank of the Middle Fork of the Willamette, the survey area was pinpointed specifically. Once section corners were located, the investigator and his field assistant ran transects between the river and the base of the hillside until such "runs" yielded evidence of the old road ruts. This procedure proved very suitable as a means of locating the road and was employed throughout the reconnaissance. Where the road appeared to vanish, careful reference was made to early maps, especially the Cadastral Survey records, to pinpoint the sites where the road crossed tributary creeks or came near the base of buttes or hillsides. This method consistently yielded on-the-ground features.

VI. CULTURAL RESOURCES

The cultural resources associated with the Oregon Central Military Wagon Road are enumerated in detail in Volume Two of this study. The inventory volume treats the entire road as a single historical cultural resource, but identifies a number of special sites or features associated with the route. These include Ridgdon Meadows, an important camping place and way station; Indigo Springs, a superb source of fresh water and rest at the base of the ascent to the summit of the Cascades; the summit; and the ford of the Little Deschutes River--a feature clearly identified by a deeply blazed tree.

The road retains many miles of its original features in a condition that enables ready identification of the route on the ground. Nevertheless, Forest Service Roads, the railroad along the north bank of the Middle Fork of the Willamette west of Oakridge, extensive logging (especially in the area southeast of Crescent Lake), and other impacts have in some cases obliterated the original road traces.

In spite of the negative impacts, the Oregon Central Military Wagon Road clearly merits nomination to the National Register of Historic Places. The finest road segments lie between Sand Prairie Camp Ground at the head of Hills Reservoir and the southeast corner of Crescent Lake. It is possible, however, to identify the route with fair certainty to where it enters Klamath County to the southeast. This road has excellent documentation and possesses a unique potential for interpretation. The visual qualities along the road from the head of Hills Reservoir to the Klamath County boundary are high. The route retains the potential for development as an important, historic hiking trail.

VII. RECOMMENDATIONS

Work Not Accomplished

The contract specifications call for the identification of any work not accomplished, especially literature not reviewed or studied. The principal investigator is unable to identify any extant record groups, manuscripts, or published sources of relevance to this study which were not examined or utilized for the research and writing of this report. It is possible that additional manuscript diaries--such as that of Lt. J. W. Swank (1860)--may eventually be found or be deposited in public libraries. Similarly it is conceivable that further reading of the nineteenth century newspapers published in the upper Willamette Valley would yield miscellaneous data about the road. The principal investigator, however, concludes that he has adequately carried out the assignment.

Specific Actions

The principal investigator recommends the following specific actions and gives a rationale for each recommendation:

(1) National Register Nomination.

The Oregon Central Military Wagon Road clearly merits nomination to the National Register of Historic Places. The route is one of three major nineteenth century routes of travel across the Willamette and Deschutes National Forests. It was the major artery of emigration and commerce from the upper Willamette Valley into Central and Southeastern Oregon. The road has a unique quantitative data base from which its significance can be documented. The route meets the criteria of the National Register of Historic Places.

The Jacksonville-Fort Klamath Wagon Road, also opened in the 1860's, was nominated by the joint action of the Rogue River and Winema National Forests. The Barlow Road (Old Oregon Trail) has been researched and written up for nomination by the Mount Hood National Forest. All of these federal agencies have seen these historic routes as part of their management mandates under existing federal law.

(2) Interpretation Program.

The Oregon Central Military Wagon Road should play an important part in the interpretive programs for cultural resources of the Willamette and Deschutes National Forests. At present five signs remain in the watershed of the Middle Fork of the Willamette River which address the presence of the wagon road. These signs are

not based upon extensive research and do not adequately place the road in its larger historical context. More needs to be done for the viewer to gain a clear understanding of the development and significance of the Oregon Central Military Wagon Road.

A program of signing and the development of a map-brochure as well as the inclusion of the road's history in the other publications of the forests is in order. Using the "Oregon Trail" interpretive program mounted in 1975-76 by the Oregon Department of Transportation (State Parks) along Interstate 80N, the Mount Hood National Forest in 1980-81 had prepared copy for a new series of signs and a seven-fold, eight-panel map-brochure on "The Barlow Road--Old Oregon Trail." The Forest Service intends to make this map-brochure available to recreation users.

(3) Historic Archaeology.

Of the many sites along the Oregon Central Military Wagon Road which were used by travelers, the way station at Rigdon Meadows has the clearest potential for historic archaeology and the recovery of artifacts that could be used in interpretation programs. The site probably does not possess stratigraphy but may contain both privy pits and refuse deposits that contain cultural information. Care should be taken to avoid ground-disturbing activity at this site. An appropriate future action is testing at Rigdon Meadows to determine what may be its potentials for historic archaeology.

(4) Protection and Restoration.

An immediate program of protecting the extant road segments of the Oregon Central Military Road should be instituted by the Forest Service. Future road construction, thinning, and the operating of heavy equipment can all have negative impacts on this historic route. This recommendation should not be construed as prohibiting those activities--it should be assumed that the road is a management responsibility of the Forest Service and thus it merits special attention.

The Mount Hood National Forest has over the past six years been able to open much of the old Barlow Road as an historic hiking trail in the summer and a cross-country ski route in the winter by the labor of volunteers. Boy Scout troops, Job Corps workers, and individual volunteers have brushed out the old road, restored rock foundations at fills, and made small drainage ditches to mitigate against erosion. Today hikers can traverse many miles of the Old Oregon Trail because of this volunteer program coordinated through the Zig Zag Ranger District. The Oregon Central Military Wagon Road has a similar potential.

The Oregon Central Military Wagon Road has obvious potentials for development as a trail system which would link the Willamette Greenway at Eugene-Springfield to the Pacific Crest Trail along the summit of the Cascades. The north or east shore of Lookout Point Reservoir is little used by traffic and is adjacent to the old road route which lies beneath the waters of that lake. It is possible to envision a major historic hiking route which would follow the Oregon Central Military Wagon Road across Oregon, especially since so much of this route is on public lands (such as those managed by the U. S. Forest Service, the Bureau of Land Management, and the U. S. Fish and Wildlife Service).

VIII. REFERENCES

Anonymous

- n.d. A Plan to Monument Significant Points on the Oregon Central Military Wagon Road and the Lost Wagon Train of 1853. MS Typescript, Willamette National Forest, Eugene, Ore.
- 1864a Wagons for Canyon City. Oregon State Journal (Eugene City, Ore.), June 18.
- 1864b McKenzie Road. Oregon State Journal (Eugene, Ore.), July 2.
- 1864c The McKenzie Road. Oregon State Journal (Eugene, Ore.), Oct. 1.
- 1864d Bill Granting Land for the Construction of the Middle Fork Road. Oregon State Journal (Eugene City, Ore.), Apr. 16.
- 1864e The New Road. Oregon State Journal (Eugene City, Ore.), Apr. 16.
- 1864f The Travel to the Mines. Oregon State Journal (Eugene City, Ore.), Apr. 23.
- 1864g Started. Oregon State Journal (Eugene City, Ore.), June 11.
- 1864h Returned. Oregon State Journal (Eugene City, Ore.), June 25.
- 1864i [Article?]. Oregon State Journal (Eugene City, Ore.), Dec. 24.
- 1865a The Trade with Owyhee. Oregon State Journal (Eugene City, Ore.), April 1.
- 1865b Commencing Work. Oregon State Journal (Eugene City, Ore.), April 8.
- 1865c Middle Fork Wagon Road. Oregon State Journal (Eugene City, Ore.), May 6.
- 1865d Exploring the Route. Oregon State Journal (Eugene City, Ore.), May 6.
- 1865e [Article?]. Oregon State Journal (Eugene City, Ore.), May 20.

- 1865f Middle Fork Road. Oregon State Journal (Eugene City, Ore.), June 24.
- 1865g Middle Fork Road. Oregon State Journal (Eugene City, Ore.), Aug. 26.
- 1866a Commencing Work. Oregon State Journal (Eugene City, Ore.), Mar. 31.
- 1866b Will Indians Work? Oregon State Journal (Eugene City, Ore.), July 28.
- 1866c Excursions in the Cascade Mountains--the Central Military Road. Oregon State Journal (Eugene City, Ore.), July 7.
- 1866d 25 Men Wanted. Oregon State Journal (Eugene City, Ore.), Aug. 11.
- 1867a From the Military Road. Oregon State Journal (Eugene City, Ore.), Sept. 14.
- 1867b Suspended. Oregon State Journal (Eugene City, Ore.), Oct. 25.
- 1869 Diagram of the Oregon Central Military Wagon Road. MS, State Archives, Salem, Ore.
- 1903 Portrait and Biographical Record of the Willamette Valley Oregon. Chicago: Chapman Publishing Co.
- 1906 State Will Profit: Purchasers of Oregon Wagon Road Lauds Men of Action. Oregonian (Portland, Ore.), Aug. 19.

Bailey, Vernon

- 1936 The Mammals and Life Zones of Oregon. Washington, D. C.: U. S. Government Printing Office.

Baldwin, Ewart

- 1959 Geology of Oregon. Eugene, Ore.: University of Oregon Cooperative Book Store.

Bancroft, Hubert Howe

- 1886 History of Oregon, Vol. 1, 1834-1848. San Francisco, Calif.: The History Company, Publishers.
- 1888 History of Oregon, Vol. 2, 1848-1888. San Francisco, Calif.: The History Company, Publishers.

Barth, Gunter, ed.

- 1959 All Quiet on the Yamhill: The Civil War in Oregon.
Eugene, Ore.: University of Oregon Books.

Beckham, Stephen Dow

- 1971 Requiem For a People: The Rogue Indians and the Frontiersmen. Norman, Okla.: University of Oklahoma Press.
- 1977 The Indians of Western Oregon: This Land Was Theirs. Coos Bay, Ore.: Arago Books.

Beckham, Stephen Dow, Rick Minor, and Kathryn Anne Toepel

- 1981 Prehistory and History of BLM Lands in West-Central Oregon: A Cultural Resource Overview. Eugene, Ore.: University of Oregon Anthropological Papers No. 25.

Bruce, Henrietta Steinke

- 1936 A History of the Oregon Central Military Wagon Road Company With Reference to the Histories of Four Other Land Grant Companies in the State of Oregon. M.A. Thesis, University of Oregon, Eugene, Ore.

Clark, Keith and Lowell Tiller

- 1966 Terrible Trail: The Meek Cutoff, 1845. Caldwell, Idaho: The Caxton Printers, Ltd.

Clark, Robert Carlton

- 1927 History of the Willamette Valley Oregon. 3 vols. Chicago, Ill.: S. J. Clarke Publishing Co.

David, John B.

- 1869 Cadastral Survey Map, T23S, R3E. MS, BLM Archives, Portland, Ore.
- 1869 Cadastral Survey Map, T24S, R4E. MS, BLM Archives, Portland, Ore.

Flach, Victor H. and F. E. Washburn

- 1925 Cascade National Forest Oregon. n.p.: U. S. Department of Agriculture, Forest Service.

Franklin, Jerry F. and C. T. Dyrness

- 1973 Natural Vegetation of Oregon and Washington. Portland, Ore.: Pacific Northwest Forest and Range Experiment Station, U. S. Forest Service Department of Agriculture General Technical Report PNW-8.

Hamburg, Morris

- 1974 Basic Statistics: A Modern Approach. New York: Harcourt Brace Jovanovich, Inc.

- Helfrich, Devere
 1976 Applegate Trail II: "West of the Cascades." Klamath Echoes No. 14.
- Jackson, W. Turrentine
 1949 Federal Road Building Grants for Early Oregon. Oregon Historical Quarterly 50: 3-29.
- 1952 Wagon Roads West: A Study of Federal Road Surveys and Construction in the Trans-Mississippi West, 1846-1869. Berkeley and Los Angeles, Calif.: University of California Press.
- Johansen, Dorothy O. and Charles M. Gates
 1967 Empire of the Columbia: A History of the Pacific Northwest. New York: Harper & Row.
- Jonasson, Jonas A.
 1942 Local Road Legislation in Early Oregon. Oregon Historical Quarterly 42: 162-72.
- Knuth, Priscilla
 1966 'Picturesque' Frontier: The Army's Fort Dalles. Oregon Historical Quarterly 67: 293-346.
- Legard, Harold A. and LeRoy C. Meyer
 1973 Willamette National Forest Soil Resource Inventory. Portland, Ore.: U. S. Forest Service, Pacific Northwest Region.
- Loy, William, ed.
 1976 Atlas of Oregon. Eugene, Ore.: University of Oregon.
- Meekham, H. S.
 1912 Cascade National Forest Oregon. n.p.: U. S. Department of Agriculture, Forest Service.
- Menefee, Leah Collins and Lowell Tiller
 1976-78 Cut Off Fever. Oregon Historical Quarterly 77: 308-40; 78, 41-72, 121-57, 207-50, 293-331; 79: 4-50.
- Merriam, L. C., Jr., ed.
 1959 The First Oregon Cavalry and the Oregon Central Military Road Survey of 1865. Oregon Historical Quarterly 60: 89-124.
- Murphy, D. and M. O. C. Murphy
 1854 Cadastral Survey Map, T18S, R2W. BLM Archives, Portland, Ore.

O'Callaghan, Jerry A.

- 1952 Klamath Indians and the Oregon Wagon Road Grant, 1864-1938. Oregon Historical Quarterly 53: 23-28.

Oregon State Water Resources Board

- 1961 Upper Willamette Basin. Salem, Ore.: Oregon State Water Resources Board.
- 1965 Mid-Coast Basin. Salem, Ore.: Oregon State Water Resources Board.
- 1967 Willamette River Basin. Salem, Ore.: Oregon State Water Resources Board.

Patterson, A. W.

- 1857a Cadastral Survey Map, T20S, R2E. MS, BLM Archives, Portland, Ore.
- 1857b Cadastral Survey Map, T21S, R2E. MS, BLM Archives, Portland, Ore.

Patterson, A. W. and John B. David

- 1856-69 Cadastral Survey Map, T21S, R3E. MS, BLM Archives, Portland, Ore.

Pengra, B. J.

- 1865 Letter from Fort Klamath. Oregon State Journal (Eugene City, Ore.), Aug. 12.
- 1866a Report of B. J. Pengra, Superintendent, to the Board of Directors. Oregon State Journal (Eugene City, Ore.), July 14.
- 1866b Report of B. J. Pengra, Superintendent, to the Board of Directors. Oregon State Journal (Eugene City, Ore.), July 21.
- 1866c Report of B. J. Pengra, Superintendent, to the Board of Directors. Oregon State Journal (Eugene City, Ore.), July 28.
- 1866d Report of B. J. Pengra, Superintendent, to the Board of Directors. Oregon State Journal (Eugene City, Ore.), Aug. 4.
- 1866e Report of B. J. Pengra, Superintendent, to the Board of Directors. Oregon State Journal (Eugene City, Ore.), Aug. 11.
- 1866f Report of B. J. Pengra, Superintendent, to the Board of Directors. Oregon State Journal (Eugene City, Ore.),

Aug. 18.

Perkins, Mensch, and Keating

1902 Cadastral Survey Map, T24S, R5E. MS, BLM Archives,
Portland, Ore.

Rigdon, Stephen

1871-96 Rigdon Papers. MSS, Oregon Historical Society,
Portland, Ore.

Settle, Raymond, ed.

1940 The March of the Mounted Riflemen: First United States
Military Expedition to Travel the Full Length of the
Oregon Trail from Fort Leavenworth to Fort Vancouver
May to October, 1849 as Reorded in the Journals of
Major Osborne Cross and George Gibbs and the Official
Report of Colonel Loring. Glendale, Calif.: Arthur
H. Clark Co.

Simpson, Benjamin

1966 Letter of July 31 to J. W. Perit Huntington. House
Executive Document No. 1. 39 Cong., 2 Sess. Serial
1284: 85-86.

Stern, Theodore

1956 The Klamath Indians and the Treaty of 1864. Oregon
Historical Quarterly 57: 229-73.

1965 The Klamath Tribe: A People and Their Reservation.
Seattle, Wash.: University of Washington Press.

Swank, Lt. J. W.

1860 Diary of 1860. MS in possession of Paul Swank, Glendale,
Ore. Xerox copy in possession of Stephen Dow Beckham,
Lake Oswego, Oregon.

Thompson, Pengra and Meldrum

1868 Cadastral Survey Map, T25S, R7E. MS, BLM Archives,
Portland, Ore.

1868 Cadastral Survey Map, T26S, R7E. MS, BLM Archives,
Portland, Ore.

Thompson, Pengra and David

1869a Cadastral Survey Map, T24S, R6E. MS, BLM Archives,
Portland, Ore.

1869b Cadastral Survey Map, T24S, R7E. MS, BLM Archives,
Portland, Ore.

U. S. House of Representatives

- 1869 Forfeiture of Wagon-Road Grants in the State of Oregon.
House Report No. 4056, 50 Cong., 2 Sess.

U. S. Senate

- 1887 Report to Accompany Bill S. 15. Senate Report No. 2,
50 Cong., 1 Sess.
- 1888 Message From the President of the United States, Trans-
mitting Letter of Secretary of the Interior with Draught
of Bill to Forfeit Certain Lands Granted to Oregon for
Wagon Roads, and for Other Purposes. Senate Exec. Doc.
No. 124, 50 Cong., 1 Sess.

Willamette Basin Task Force

- 1969 Willamette Basin Comprehensive Study, Water and Related
Land Resources, Main Report. Willamette Basin Task Force,
Pacific River Basins Commission.

Williamson, Robert S. and Henry L. Abbot

- 1857 Reports of Explorations and Surveys, to Ascertain the
Most Practicable and Economical Route for a Railroad
from the Mississippi River to the Pacific Ocean. Vol.
6. Washington, D. C.: A. O. P. Nicholson, Printer.
(House Exec. Doc. No. 91, 33 Cong., 2 Sess.)